



# Stormwater Management Plan

**Permit #MOR04C075 / 2021 - 2026**

*Revised January 1, 2022*

## Acknowledgements

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## Introduction

### **PURPOSE**

The City of Wentzville implements a Stormwater Management Program to protect water quality and effectively reduce pollutants in stormwater runoff to the maximum extent practicable. This five-year Stormwater Management Plan (SWMP) was developed to explain this program, procedures, and schedules in accordance with Clean Water Act Phase II requirements outlined in Permit MOR04C075, state regulation 10 CSR 20-6.200 and federal regulation 40 CFR Part 122 for discharges from small regulated Municipal Separate Storm Sewer Systems (MS4s).

This document updates the SWMP and Implementation Schedule (Appendix A) for the permit period of November 1, 2021 through September 30, 2026. It is divided into six Minimum Control Measures (MCMs) as outlined in Part 4 of the MS4 Permit. Each MCM contains Best Management Practices (BMPs) and specific, measurable goals. Measurable goals are selected to evaluate the effectiveness of individual control measures and the Stormwater Management Program as a whole. This plan is reviewed annually and updated as necessary. MS4 permit excerpt language is generally shown in **blue bold text** and black text with permit section numbering. City responses are shown in gray boxes and in the Appendices.

### **BACKGROUND**

The City of Wentzville is located in St. Charles County, Missouri in the St. Louis metropolitan area. The City of Wentzville has a population of 42,296 based on the 2020 census, a 45% increase in the last decade. The City's landmass encompasses 20 miles (see Municipal Boundary Map in Appendix B). Wentzville's planning area covers 44 square miles. Approximately 98% of the population lives in developed, more urbanized areas of the City as opposed to rural or larger lot properties.

The City of Wentzville operates and maintains a Municipal Separate Storm Sewer System (MS4) that consists of 8,157 storm drain inlets and 191 miles of storm pipe. Additionally, there are 353 privately maintained stormwater facilities and 40 facilities that are publicly owned and maintained by the City. Of the 393 total stormwater facilities, 83 are designed to newer standards that address water quality.

As an MS4 operator, the City of Wentzville became regulated under the National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II Rule in 2002.

### **CLIMATE & HYDROLOGY**

Climate in the region is temperate, with average monthly temperatures ranging from 31° F in January to 79° F in July (St. Louis 1874 to present). The highest recorded temperature of 115° F occurred on July 14, 1954 (National Oceanic and Atmospheric Administration).

The average annual precipitation is 38 inches. Monthly average rainfall is highest in May at 4.26 inches. The lowest average rainfall occurs December through February with 2.19 to 2.42 inches. The wettest year with 61.24" of precipitation occurred in 2015. Average relative humidity in mid-afternoon is about 60%.

The City of Wentzville is located in two watersheds that are split predominately by Interstate 70. The Big Creek Watershed (drainage area) is on the north side of I-70. Major tributaries within the City include McCoy Creek, Dry Branch Creek, Crossroads Creek, Spring Creek and Enon Branch. There are approximately 21.5 miles of stream through Wentzville in the Big Creek watershed. Major streams are listed below in Figure 2; some creeks are unnamed. Spring Creek has 2.8 miles of gaining streams where the channel bottom is lower than the groundwater table. Remaining streams have permanent or intermittent flow that discharge into McCoy (HUC 071100080408) and then Big Creek outside of Wentzville's City limits.

The Peruque Creek Watershed (HUC 071100090102) is mostly south of I-70. Peruque Creek is a permanently flowing stream that runs roughly 9.6 miles east from Foristell into Lake St. Louis, then north to the Mississippi River. Of the many tributaries that feed Peruque Creek, Sam's Creek is the only named tributary in the Wentzville area.



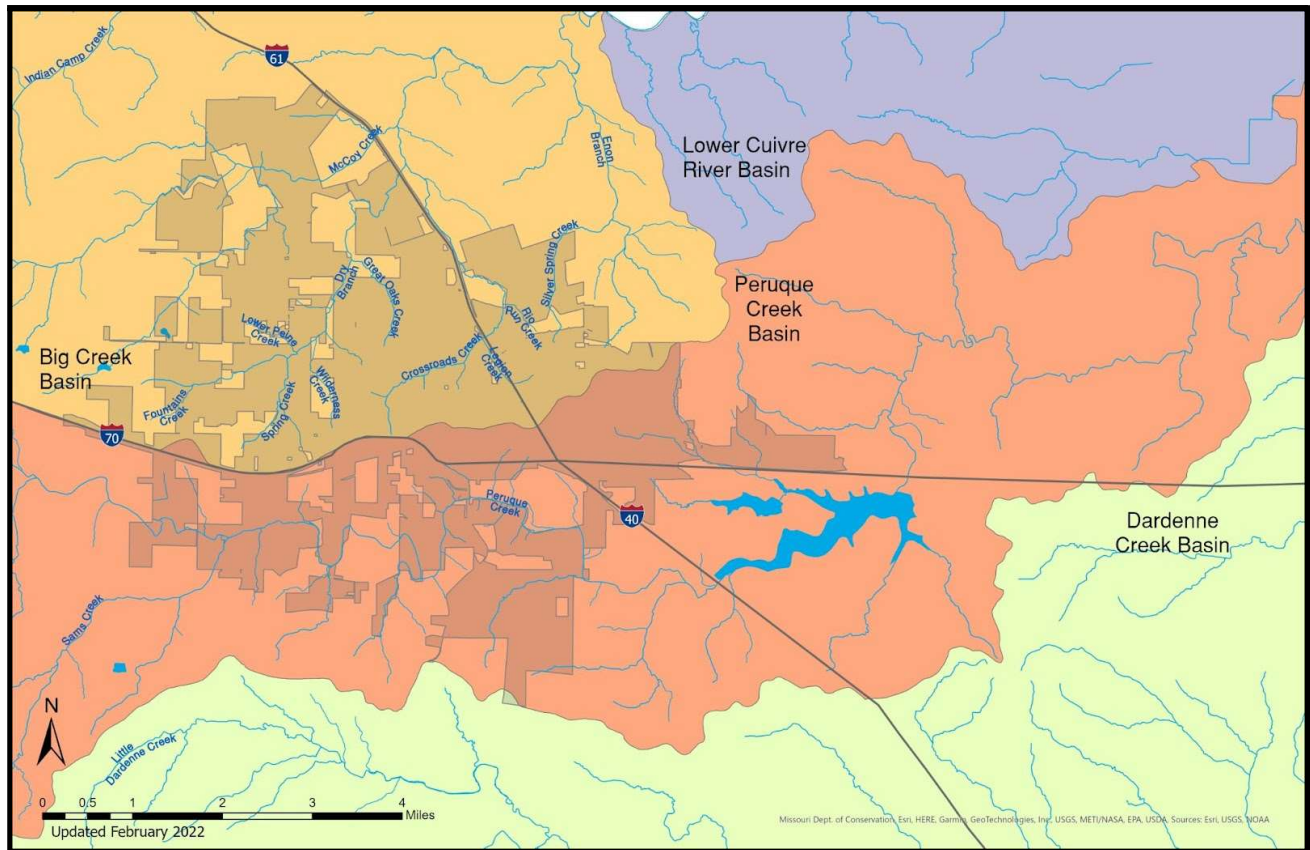


Figure 1. Wentzville Watershed Map

Stream Name	Length through Wentzville (miles)
Crossroads Creek	4.5
Dry Branch Creek	5.7
Enon Branch	1.3
McCoy Creek	1.5
Peruque Creek	9.6
Spring Creek	1.3
<b>Total</b>	<b>23.9</b>

Figure 2. Wentzville's Major Streams

## **WATER QUALITY**

### **Peruque Creek (WBID 218)**

Peruque Creek is listed on Missouri's 2020 EPA-approved 303(d) List of Impaired Waters (Appendix C). This warm-water creek is listed as impaired for aquatic macroinvertebrate bioassessments/unknown (due to nonpoint source pollutants) and dissolved oxygen (due to unknown sources) from N. Stringtown Road in Warren County to Lake St. Louis. Beneficial uses include providing warm water aquatic habitat; secondary and whole-body contact recreation; irrigation; and human health, livestock and wildlife protection. More recent representative data has been collected by the Missouri Department of Natural Resources in the last seven years to continue to assess current condition, sources of impairment and stressors. The *Peruque Creek 2014-2015 Biological Assessment and Stressor Study Report* is available at [www.dnr.mo.gov](http://www.dnr.mo.gov).

In accordance with Section 303(d) of the Clean Water Act (CWA), once a waterbody is listed, a Total Maximum Daily Load (TMDL) must be developed to set the maximum amount of pollution that can enter the stream and still maintain water quality standards. A TMDL is scheduled to be developed for Peruque Creek in 2026-2030.

### **McCoy Creek (WBID 214)**

As a result of impacts from urban and agricultural runoff, McCoy Creek was listed on Missouri's CWA section 303(d) list of impaired waters for low dissolved oxygen (DO) in 2012. To address the impairment and concerns about future urban growth, partners completed a nine-element watershed-based plan (WBP) for the Dry Branch Creek watershed (a subwatershed of McCoy Creek) to identify target pollutants, sources and prioritize solutions for the community.

Water quality was improved by retrofitting several existing stormwater facilities and installing green infrastructure projects at residential, commercial and park properties. Best Management Practices (BMPs) were also applied in agricultural areas within the watershed. Water quality data collected in 2016 showed that all DO concentrations met the state's water quality standard (WQS), resulting in the segment of McCoy Creek in Wentzville being removed from the CWA section 303(d) in 2018. Project details can be found at [www.wentzvillemo.gov/stormwater](http://www.wentzvillemo.gov/stormwater) and in the Nonpoint Source Success Story in Appendix D.

## Permit Coverage & Applicability

### 1.1.A PERMIT AREA

This Missouri State Operating Permit covers all areas served by a Municipal Separate Storm Sewer System (MS4) for which the applicant is identified as the Continuing Authority. The Permit Area may change based upon areas incorporated into or removed from the permittee's jurisdictional area during the term of this permit, or expansion of the Urbanized Area. Areas added shall be covered under this permit and noted in the Stormwater Management Plan.

### 1.1.B APPLICABILITY

This permit authorizes discharges of stormwater from regulated MS4s, as defined in 10 CSR 20-6.200(D)24. This permit also authorizes the discharge of stormwater commingled with flows contributed by process wastewater, non process wastewater or stormwater associated with industrial activity provided such discharges are authorized under separate National Pollutant Discharge Elimination System (NPDES) permits or no exposure certification as defined in 10 CSR 20- 6.200(C).

### 1.1.C CATEGORIES OF REGULATED SMALL MS4s

This comprehensive permit categorizes MS4s by the following categories, or Groups, based on the population served as determined by the most recent Decennial Census at the time of permit issuance, the type of Regulated MS4, and the co-permittee situation.

Group A	Group B	Group C
Traditional Small MS4s (cities) that serve a population of less than 10,000 within a UA; OR	Traditional Small MS4s that serve a population of at least 10,000 but less than 40,000; OR	Traditional Small MS4s that serve a population of 40,001 or more; OR
Class 2 counties; Non-traditional such as Universities, Federal facilities.	Class 1 Counties	Co-permit Small MS4s

## Permit Restrictions & Exemptions

### 2.1.C DISCHARGE LIMITATIONS

1. The permittee shall implement Best Management Practices (BMPs) via an iterative process to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) into the MS4 for the goal of attainment with Missouri's Water Quality Standards.
2. The permittee shall implement and enforce a Stormwater Management Program per the requirements listed in this operating permit in accordance with section 402(p)(3)(B)(iii) of the CWA, corresponding NPDES regulations, 40 CFR 122.34, 40 CFR 122.28(d)(2), and in accordance with the Missouri Clean Water Law (MCWL) and its implementing regulations under 10 CSR 20-6.200.
3. The permittee shall comply with all provisions and requirements contained in this permit and with their individual Stormwater Management Program including plans, ordinances, and schedules developed in fulfillment of this permit.
4. If the Department determines a regulated MS4 is causing or contributing to instream excursions of Missouri's Water Quality Standards, then the Department may require corrective action(s) or require an application for a site specific permit to ensure that BMPs are being implemented via an iterative process to reduce pollutants to the MEP.
5. Newly designated regulated MS4s applying for coverage under this general permit and discharging to waterbodies or watersheds subject to an existing EPA approved or established TMDL may be denied coverage under this general permit and required to apply for and obtain a site-specific operating permit for stormwater discharges from their regulated MS4.

## Stormwater Management Program and Plan

### **3.1.A Stormwater Management Program**

To the extent allowable under state and local law, a Stormwater Management Program must be developed, implemented, and enforced according to the requirements of this general permit. This permit includes specific terms and conditions, which are the requirements needed to meet the MS4 regulatory requirements.

1. Existing permittees shall assess program elements that were described in the previous permit, modify as necessary, and/or implement new elements, as necessary.

### **3.1.B Stormwater Management Program**

As part of the Stormwater Management Program, the permittee shall update or develop a document, with appropriate appendices and supplemental attachments explaining the Stormwater Management Program. Permittees shall create and maintain this written Stormwater Management Plan (SWMP) describing schedules, procedures, contacts or other items listed under Part 4 of this permit. This document may be electronic.

1. The SWMP shall be maintained by the MS4 Operator to ensure consistency with the implementation, continuity of the Stormwater Management Program, and iterative reviews of programmatic BMPs and procedures.
2. The SWMP does not go through Department approval and is not incorporated into this permit.
3. The SWMP shall be updated or developed within 90 days after renewal of the permit.

### **3.1.C** The MS4 Operator may add supplemental items to the SWMP, including, but not limited to:

- Maps;
- Standard operating procedures (SOPs);
- Inspection forms;
- Sample data;
- Documentation of agreements for co-permittees and/or cooperative agreements.
- Website or social media tracking;
- Stream Team Activity Reports;
- Tracking and evaluation documents;
- Operations and Maintenance Manual;

### **3.1.D** Permittees shall implement programmatic BMPs consistent with the provisions of this permit to achieve compliance with the standard of reducing pollutants to the maximum extent practicable per 40 CFR 122.34.

### **3.1.E** The MS4 Operator may replace or modify ineffective BMPs with effective BMPs. If the name of a MS4 contact changes, that may be updated on the next Stormwater Management Program Report and/or via email to the Department at [MS4@dnr.mo.gov](mailto:MS4@dnr.mo.gov).

## Minimum Control Measures

### **PART 4. MINIMUM CONTROL MEASURES**

Entities under coverage of the MOR04C general permit shall develop and implement a Stormwater Program that includes the following six (6) Minimum Control Measures (MCMs).

## MCM 1. Public Education and Outreach on Stormwater Impacts

### **4.1 The MS4 Operator shall implement a public education program to distribute educational materials to the community and/or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.**

The public education and outreach program shall, at a minimum include the following:

#### **4.1.A The MS4 Operator shall target specific audiences who are likely to have significant stormwater impacts.**

Choose which is applicable:

- ☒ Traditional MS4s (cities and counties) shall address the residents being served by the MS4;  
or
- ☐ Non-traditional MS4s shall address the community served by the MS4 as listed below:
  - ☐ Universities shall target the faculty, other staff, and students;
  - ☐ Military bases shall target military personnel (and dependents), and employees (including contractors)
  - ☐ Prison complexes or other multi-building complexes shall target staff and applicable contractors.

**Additional audiences within the MS4 service area (such as but not limited to, those listed in Table I) shall be addressed as listed below:**

Choose which is applicable:

- ☐ Group A: No requirement for additional audiences
- ☐ Group B: A minimum of one (1) additional audiences
- ☒ Group C: A minimum of two (2) additional audiences

The target audiences may remain the same for the entire permit cycle or may change if the tracking and adaptive management reviews show a new target may be better for the MS4. Any changes shall be stated and explained in the MS4 Stormwater Management Program Report.

**Table I - Target Audiences**

- ☐ Schools, educational organizations, or youth service and youth groups;
- ☐ Businesses, including commercial facilities, home-based and mobile businesses;
- ☐ Institutions or formal organizations such as churches, hospitals, service organizations;
- ☒ Developers or construction site operators;
- ☐ Homeowner or neighborhood associations;
- ☐ Industrial facilities;
- ☒ Local government;
- ☐ Contractors;
- ☐ Visitors/tourists; and
- ☐ Other target groups, noted in the MS4 Stormwater Management Program Report.

- 4.1.B The MS4 Operator shall target specific pollutant(s) in the permittee’s education program (such as, but not limited to, those listed in Table II).** Each MS4 shall have a minimum of one target pollutant for each target audience from Section 4.1.A. The same pollutant may be used for more than one target audience, the target pollutant(s) may change annually as needed.

**Table II - Example Pollutants/sources (not limited to this list)**

- Grass clippings & leaf litter;
- Fertilizer & pesticides;
- Litter, trash containment, balloon releases;
- Dumping of solid waste;
- Illegal disposal of household hazardous waste;
- Pet waste;
- Failing septic systems;
- Swimming pool discharge, including salt water pools;
- De-icing/ rock salt usage/ storage;
- Oil, grease, fluids from vehicles;
- Sediment runoff from construction/land disturbance;
- Unauthorized discharge of restaurant waste;
- Power washing;
- Unauthorized discharge of industrial waste;
- Vehicle washing; and
- Wash water/ gray water.

Target Audience	Target Pollutant(s)
Residents	<ul style="list-style-type: none"> <li>● Litter</li> <li>● Oil, grease, fluids from vehicles</li> <li>● Improper disposal of household/yard waste</li> </ul>
Developers/Construction Site Operators	<ul style="list-style-type: none"> <li>● Sediment runoff from construction/land disturbance;</li> <li>● Litter and trash containment</li> <li>● Oil, grease, fluids from vehicles</li> </ul>
Local Government Employees	<ul style="list-style-type: none"> <li>● Sediment runoff from construction/land disturbance;</li> <li>● Litter and trash containment</li> <li>● Oil, grease, fluids from vehicles</li> </ul>
Homeowners Associations (Optional)	<ul style="list-style-type: none"> <li>● Litter (as needed)</li> </ul>

- 4.1.C The MS4 Operator must utilize appropriate educational resources to be used as BMPs (materials, events, activities, etc.) in conjunction with the selected pollutants for the selected target audiences.**

The message delivered by these BMPs needs to be applicable to the target audience and relate to the target pollution. The distribution of the BMPs needs to be effective, and when possible associated with the target audience or pollutant (such as a swimming pool water disposal flyer when applying for a swimming pool permit). BMPs which are ongoing throughout the year or permit cycle may be counted as one annual BMP. The permittees SWMP shall explain how each BMP relates to the target pollutant and target audience. The MS4 Operator may change BMPs during the permit cycle if determined appropriate through tracking and adaptive management reviews show a different BMP may be more effective for the MS4. Any changes shall be reflected in the SWMP and explained in the MS4 Stormwater Management Program Report.



Using **Table III**, over the permit term the MS4 Operator shall implement a minimum of the following, including the tracking and adaptive management processes:

- ☐ Group A: Each permit cycle; two (2) education and outreach BMPs from Table III.
- ☐ Group B: Each permit cycle; four (4) education and outreach BMPs from Table III.
- ☒ Group C: Each permit cycle; five (5) education and outreach BMPs from Table III.

BMP	Target Pollutant(s)	Target Audience	Permit Year
Website	<ul style="list-style-type: none"> <li>Litter/trash</li> <li>Sediment runoff</li> <li>Oil, grease, fluids from vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Residents</li> <li>Developers/Construction Site Operators</li> <li>Local Government Employees</li> <li>Homeowners' Associations</li> </ul>	2021-2026
Storm Drain Markers	<ul style="list-style-type: none"> <li>Litter/trash</li> <li>Sediment runoff</li> <li>Oil, grease, fluids from vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Residents</li> </ul>	2021-2026
Articles	<ul style="list-style-type: none"> <li>Litter/trash</li> <li>Improper disposal of household/yard waste</li> </ul>	<ul style="list-style-type: none"> <li>Residents</li> <li>Homeowners Associations</li> </ul>	2021-2026
Educational Meetings, Seminars or Trainings	<ul style="list-style-type: none"> <li>Litter/trash</li> <li>Sediment runoff</li> </ul>	<ul style="list-style-type: none"> <li>Residents</li> <li>Developers/ Construction Site Operators</li> <li>Local Government Employees</li> <li>Homeowners Associations</li> </ul>	2021-2026
Targeted Education Campaign	<ul style="list-style-type: none"> <li>Sediment runoff</li> </ul>	<ul style="list-style-type: none"> <li>Developers/ Construction Site Operators</li> </ul>	2021-2026
<p><i>Note: Additional BMPs from Table III below may be elected during the permit cycle in addition to or in lieu of BMPs in this table as opportunities or need arises.</i></p>			

Table III - Outreach and Education BMPs (Selected by the City)

BMPs	Measurable goals (The quantity or frequency required to count as a full BMP)	Tracking & Adaptive Management
Information on the MS4 Operator's website	Maintain a web page with up-to-date information, & working links. All links shall be checked, and the page shall be updated as necessary at minimum annually. Must be maintained the entire year.	The number of hits shall be tracked. The MS4 Operator shall use this to see which messages get reactions and if certain messages may need more education.
Require installation of permanent embossed or precast inlets with "No Dumping-Drains to Stream" or a similar message	Requirement for all new inlets in the MS4 area.	Number of inlets, the location of the inlets shall be tracked. These areas shall be noted on MCM #3 dry weather screenings, and illicit discharge investigations as a method to determine if the markings are effective or if areas could benefit from the markings
Publish articles in a local newsletter, may be electronic	Develop topics that are group-specific and address activities and or pollutants of concern at a seasonally appropriate time. A minimum of two articles annually shall be published or emailed.	To the extent possible evaluate the pollutant before the article, and again after to see if there has been a change. Consider including a mechanism to track active response such as following the social media account or a website to visit. Track those responses to determine if the article was effective in reaching people.
Promote, host, or develop educational meetings, seminars, or trainings	The events shall address ways attendees can minimize or avoid adverse stormwater impacts or practices to improve the quality of stormwater runoff. A minimum of two events shall be held, hosted or promoted annually. These events may address different pollutants/audiences.	Attendance and any distributed education materials shall be tracked. This shall be used to gauge interest in the topic. Consider using a questionnaire or follow-up survey to track if the attendees retained information or found the event beneficial.
Targeted education campaign, via mail, email, or in person	Minimum of one annually OR with a specific event. (Examples: Sediment control with small building permit; leaf litter email during street sweeping season, or education brochure to all businesses conducting certain activity.)	Education material distributed, or amount of people contacted shall be tracked. Follow up on if noticeable behavior has changed.



Table III.a - Outreach and Education BMPs (Optional)

BMPs	Measurable goals (The quantity or frequency required to count as a full BMP)	Tracking & Adaptive Management
Social media posts, social media campaign	Post a minimum of four (4) times a year, on a minimum of one social media platform. The messages shall address ways attendees can minimize or avoid adverse stormwater impacts or practices to improve the quality of stormwater runoff. The messages shall be seasonally appropriate. Must be continued for the full year.	The number of views, impressions and other interactions shall be tracked. The MS4 Operator shall use this to see which messages get reactions and if certain messages may need more education.
Maintain, or mark storm inlet with “No Dumping – Drains to Stream” or similar message. In addition to, or instead of, permanent wording cast into the inlet structure	Placard, stencil, or paint, a minimum of 10% of all known stormwater inlets in the MS4 area per year.	Number of inlets, the location of the inlets, and how they were marked shall be tracked. These areas shall be noted on MCM #3 dry weather screenings, and illicit discharge investigations as a method to determine if the markings are effective or if areas could benefit from the markings.
Media/ advertising campaign: Billboard; Bus shelter/ bench; radio/ television/ movie theater/ areas of high visibility	Develop topics that address activities and/or pollutants of concern. Advertisement must be active for a minimum of three weeks; OR must have an estimated exposure for the duration of the campaign that is 2 times the most recent U.S. Census Bureau decennial population value for the permit area.	To the extent possible, evaluate the pollutant before the advertising campaign, and again after to see if there has been a change. The dates, time, and/or estimated media exposure for each spot broadcast shall be documented. Consider including a mechanism to track active response such as a QR Code, following the social media account(s) or a website to visit. Track those responses to determine if the advertisement was effective in reaching people.
Permanent Stormwater related signage	Place signage in a location where the message is relevant and highly visible to the target audience. Signage will count as an annual BMP for the year it was put in place and for each subsequent year of this permit cycle as long as each of those years tracking is taking place to message effectiveness and to ensure the signage is maintained.	Evaluate the pollutant before the signage, and again after to see if there has been a change. Consider including a mechanism to track active response such as following on social media, a QR Code, or a website to visit. Track those responses to determine if the signage was effective in reaching people.
Fact sheets/ brochures/ utility bill insert/ door hangers	The sum of all fact sheets, brochures, bill inserts, handouts, or e-mails distributed in one year shall be at minimum equal to the most recent U.S. Census Bureau decennial housing units value for the permit area.	The applicable U.S. Census housing units value shall be recorded, and the amount of material shall be recorded. This may be a combination of materials, using a targeted approach to get the appropriate material to the applicable audience.
Paid membership in a regional or watershed group	The organization must focus on stormwater runoff.	The group may enact BMPs on behalf of all members, the permittee must participate to ensure their MS4 has representation and receives some of the educational BMPs.

**4.1.D The MS4 Operator must create opportunities, or support activities that are coordinated by citizen groups, for residents and others to become involved with the Stormwater Management Program.**

The activities (BMPs) must have an effort to impact stormwater runoff by improving water quality.

Using **Table IV**, the MS4 Operator shall implement a minimum of the follow including the tracking and adaptive management processes:

- ☐ Group A: Each permit cycle; one (1) involvement BMP from Table IV.
- ☐ Group B: Each permit cycle; two (2) involvement BMPs from Table IV.
- ☒ Group C: Each permit cycle; three (3) involvement BMPs from Table IV.
- ☐ Co-permittees: Each permit cycle; one (1) involvement BMP in the boundaries of each co-permit.

**Table IV - Involvement BMPs (Selected by the City)**

BMP	Measurable Goal	Adaptive Management	Permit Year	MS4 Operator Support (4.1.E)
Stream/lake or Watershed clean-up events; Litter clean-up events such as street or stream cleanups, park cleanup events, Mission: Clean Stream Adopt-A-Spot;	To be considered an event, the land area cleaned must be at minimum 2 acres, or 400 yards of stream/ streambank/ watershed, or 2 miles of roadside. (These may be combined such as 1 acre of land and 200 yards of stream.)	Track the area or distance cleaned (by acre, yard or lane miles), the amount of waste removed (by tonnage, cubic yard, or Stream Team bag count) and the attendance. Use the waste measurements to determine if there are priority areas for litter entering stormwater, or areas for illegal dumping.	2021-2026	Host/support/ promote stream and litter cleanup events
Stormwater related speaker series	Provide a minimum of two sessions a year. These may be different speakers and/or audiences.	Record the attendance, the topic covered, and any training materials distributed. Use these numbers and interactions during the event to determine if the project or training covered a topic of interest and/or a topic that could be brought to a different or wider audience.	2021-2026	Provide and promotes speaker at public meetings and events such as builder workshops, Stormwater Advisory Committee presentations, Mission: Clean Stream and school outreach programs
Ongoing yard waste collection, designated yard waste collection area, household hazardous waste collection, or street sweeping program.	Provide the service as an annual occurrence or at a readily accessible location. For street sweeping, this shall be conducted at minimum twice a year.	Track the amount collected. If educational information is being used in conjunction with this activity track for changes due to the education. Tracking can be used with illicit discharge tracking, to determine if the rate of this type of discharge or dumping was reduced.	2021-2026	Municipal coordination of a residential yard waste collection and/or street sweeping services

Table IV.a - Involvement BMPs (Optional)

BMPs	Measurable Goal (Quantity or frequency required to count as a full BMP)	Tracking & Adaptive Management
Habitat improvement; Tree planting; Invasive vegetation removal; Stream restoration	To be considered an event, the project must be a minimum of .5 acres or 25 yards. These may be a combination. This may take place in streams, parks, areas adjacent to public waterways, and/or other green space.	Track the location(s) along with the amount planted or removed, or miles improved or restored. Analyzing the areas improved upon, the MS4 Operator shall see if there are opportunities to join the improved areas, or work on a watershed basis.
Volunteer water quality monitoring	To be considered an event, the monitoring must be conducted at a minimum once a year.	Record the sites for the volunteers, what parameters were measured/monitored, and the dates of the monitoring.
Hold events to train residents, or work on a project for homeowner associations (HOAs), or other public groups. The event or training must cover stormwater-related topics such as: building rain barrels; Fertilizer application training; Rain garden/ bioretention creation or maintenance; How to recognize illicit discharge activities and communicate observations to appropriate MS4 staff	Provide one project or training at a minimum annually.	Record the attendance, the topic covered, and any training materials distributed. Use these numbers and interactions during the event to determine if the project or training covered a topic of interest and/or a topic that could be brought to a different or wider audience.
School, public event, etc. educational display/booth; Provide information or displays that work to improve public understanding of issues related to water quality	Provide one booth or display at minimum annually. The booth or display must be staffed by staff of the MS4 at minimum 50% of the time the event is open to the public.	Record the number of interactions, the overall attendance, or the number of hours the event was staffed. Record the topic covered, and any educational materials distributed. Use these numbers and interactions during the event to determine if the project or training covered a topic of interest and/or a topic that could be brought to a different or wider audience.
MS4 area-wide stormwater survey	A series of public surveys to establish a baseline in the first year of the permit and then a minimum of annually throughout the permit cycle.	Use the same or similar questions to evaluate BMPs and/or full program effectiveness. Surveys can be done with utility bills, online, social media, or a combination. All participation should be tracked.

**4.1.E The MS4 Operator shall create or support the involvement BMP(s) in Section 4.1.D.** To be considered support given to the coordinating groups the MS4 Operator shall at minimum conduct the following or similar:

- Plan, or assist with planning, the event or activity;
- Contribute supplies, materials, tools, or equipment;
- Provide assistance from MS4 staff during the activity;
- Provide assistance with recruiting volunteers for events;
- Make a space available for projects, meetings, or events;
- Advertisement for the events;
- Supply disposal services;
- Arrange land or stream access;
- Financial support; and
- In-kind donations such as food.

See the last column in Table IV Involvement BMPs (Selected) above.

**4.1.F Using adaptive management as required in parts 4.1.A and 4.1.C, all MS4 Operators shall review their Public Education and Outreach on Stormwater Impacts Program, at minimum, annually and update implementation procedures and/or BMPs as necessary within the requirements of this permit.**

This may be conducted when preparing the MS4 Stormwater Management Program Report for submittal to the Department.

Reviews of program effectiveness occur as a part of adaptive management. Pertinent findings are provided in annual reports using the Appendix A. Implementation Schedule under Sections 5 and 6.



Figure 3: Mission: Clean Stream volunteers target litter in Wentzville streams.

## MCM 2. Public Participation

### **4.2 The permittee shall develop and implement a comprehensive public participation program that provides opportunities for public participation in the development and oversight of the permittee's Stormwater Program.**

This program must provide opportunities for public participation of the permittee's permit renewal and shall, at a minimum, comply with any state and local public notice requirements. Additionally, the program must provide opportunities for public participation in activities related to developing and implementing the Stormwater Management Program. The public participation program shall, at a minimum include the following:

#### Methods used to provide opportunities for public participation:

BMPs and metrics for 4.2 are included below and tracked on the Implementation Schedule for Minimum Control Measures (see Appendix A).

#### **4.2.A The MS4 Operator shall hold a public notice period for a minimum of thirty (30) days to allow the public to review the draft permit, and description of the MS4s Stormwater Management Program (this may be the SWMP) prior to the submission of the renewal application to the Department.**

#### **4.2.B As part of the public notice, if the MS4 Operator has a public website, the required items shall be posted on their website with a way to submit comments, along with the standard public notice methods for the MS4.**

1. The permittee shall respond to comments received during the comment period.
2. The MS4 Operator shall retain copies of any public comments and records of information submitted by the public received as part of the public notice process. These comments and responses shall be made available to the public or the Department upon request.

#### **4.2.C The MS4 Operator shall hold a public information meeting to provide information on or describe the contents of, the proposed Stormwater Management Program. This meeting shall be advertised at least thirty (30) days prior to the public meeting.**

1. As part of the notice of public meeting, if the MS4 Operator has a public website, the MS4 Operator shall post on that site, along with the standard public notice methods for the MS4. The notice of the public informational meeting, including the date, time and location.
2. The meeting must be held within the service area of the MS4. Co-permittees shall hold the meeting within the boundaries of each co-permittee.

#### **4.2.D The MS4 Operator shall have a publicly available method to accept public inquiries or concerns and to take information from the public about stormwater and related topics.**

1. This method, or a combination of method, shall encompass all MCMs of this permit. This method may be a phone number, website comment form, voicemail box, an email address, social media platform, or a combination of these.
2. All reports shall be tracked, recording the topic, location, and concern. This information can help identify pollutants of concern, priority areas, pollutant sources, educational needs, and other information the MS4 Operator may use to evaluate the Stormwater Management Program.



**Method used to accept and track public inquiries and concerns:**

Customer Service Center Hotline: (636) 639-2121  
City Website - Customer Service Center: [www.wentzvillemo.gov](http://www.wentzvillemo.gov)  
Stormwater Advisory Committee public meetings (optional)  
Volunteer Programs such as Stream Team, Mission: Clean Stream (optional)

Reports are tracked using the Customer Service Center (GovQA or as amended) and public meeting minutes.

- 4.2.E If the MS4 Operator utilizes a stormwater management panel or committee, the MS4 Operator shall provide opportunities for citizen representatives on the panel or committee.** The attendance of the meeting shall be recorded.

The City includes a Stormwater Advisory Committee as an optional BMP in the Implementation Schedule for Minimum Control Measures (see Appendix A). The committee is comprised of citizen and stakeholder representatives from the community.

- 4.2.F If the permittee has a governing board such as; County Council, City Council, or Board of Curators, a representative of the MS4 Operator, who is familiar with the MS4 Stormwater Program, shall provide an update to the governing board.** This shall be conducted at minimum, annually with the status of, or updates on, the Stormwater Management Program, and compliance with the Stormwater Management Program.

The Board of Aldermen is the governing board for the City of Wentzville. The status of, or updates on the program are provided annually and tracked in the Implementation Schedule (Appendix A).

- 4.2.G Existing permittees: Shall evaluate their current program to ensure it is in compliance with this permit and promoted to the community.** Existing permittees shall modify their program as necessary, and develop and implement elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the maximum extent practicable, following the requirements of Section 4.2 of this permit.
- 4.2.H Newly regulated permittees: Shall develop a stormwater Public Participation program.** The Permittees shall have the program fully implemented by the end of this permit term.
- 4.2.I Tracking mechanisms shall be used for tracking attendance, inquiries or concerns per the requirements of Section 4.2 of this permit.** Using adaptive management, all MS4 Operators shall review their Public Participation Program, at minimum, annually and update implementation procedures as necessary within the requirements of this permit. This shall be used to review how to best reach the public, the effectiveness of the mechanisms, the effectiveness of reaching the public and the MS4 Governing board and if the community and MS4 government are working together for water quality. Any additional events and/or BMPs shall be acknowledged in the Stormwater Management Program report.

### MCM 3. Illicit Discharge Detection and Elimination (IDDE)

**4.3 The MS4 Operator shall implement, and enforce a program to detect and eliminate illicit discharges (as defined in 10 CSR 20-6.200 at 40 CFR 122.26(b)(2)) into the regulated MS4.** The illicit discharge detection and elimination program shall at minimum, include the following:

**4.3.A A current storm sewer system map that shall be updated as needed to include features which are added, removed, or changed. This map may be paper or electronic.**

This storm sewer map, must show at a minimum:

#### Illicit discharge

Any discharge to a municipal separate storm sewer that is not composed entirely of storm water, except discharges pursuant to a state operating permit, other than stormwater discharge permits and discharges from fire fighting activities. 10 CSR 20-6.200(1)(D)7

#### MS4 Outfall

A point source as defined by 10 CSR 20-2.010 at the point where a municipal separate storm sewer discharges and does not include open conveyances connecting two municipal separate storm sewers, pipes, tunnels, or other conveyances which connect segments of waters of the state and are used to convey waters of the state. 10 CSR 20-6.200(1)(D)18

1. The location of all MS4 outfalls. The map shall be detailed enough that the outfalls can be accurately located. Completed:

- ☒ Yes (MS4 outfalls are to be refined per new definition by 11/1/2023 in accordance with 4.3.0)  
☐ No; Explain your schedule to complete (Only newly regulated MS4s or enforcement agreement):

2. The names and locations of all receiving waters of the state that receive discharges from the MS4 outfalls. Completed:

- ☒ Yes  
☐ No; Explain your schedule to complete (Only newly regulated MS4s or enforcement agreement):

3. The boundary of the regulated MS4 area. Completed:

- ☒ Yes  
☐ No; Explain your schedule to complete (Only newly regulated MS4s or enforcement agreement):

4. The map shall be readily available & used by field staff as needed. Completed:

- ☒ Yes  
☐ No; Explain your schedule to complete (Only newly regulated MS4s or enforcement agreement):

5. The map and any accompanying necessary information shall be made available to the Department upon request.

- ☒ Yes  
☐ No; Explain your schedule to complete (Only newly regulated MS4s or enforcement agreement):

**4.3.B The MS4 Operator must record the sources of information used for the map and track, at minimum:**

- ☒ A numbering or naming system of all outfalls;
- ☒ Dates that the outfall locations were verified and/or last field survey\*; and
- ☒ For newly added outfalls, the date that it was added to the storm sewer system.

*\* For MS4 outfalls refined per 4.3.A.1, dates will be added by 11/1/2023 in accordance with 4.3.O.*

**4.3.C The MS4 shall effectively prohibit non-stormwater discharges into the permittee's storm sewer system and implement appropriate enforcement procedures and actions.**

This prohibition shall be through ordinance or other regulatory mechanism, to the extent allowable under state or local law. This may be accomplished by more than one ordinance or mechanism. This may be done through a "nuisance code" however it must be certain that non-stormwater discharges are covered in this code. Such non-stormwater discharges may include, but are not limited to:

- Litter;
- Household hazardous waste disposal;
- Leaf disposal;
- Use of soaps & detergents with discharge to storm sewer;
- Illegal dumping of solid waste;
- Vehicle fluid disposal;
- Grass clippings;
- Pet waste; and
- Sewage.

Attach a copy of, or include a link to the applicable ordinance:

Municipal Code Chapter 725: Stormwater Pollution Control is available through the City's website Municipal Code link: [www.wentzvillemo.gov/government/municipal\\_code/index.php](http://www.wentzvillemo.gov/government/municipal_code/index.php)

Attach a copy of, or include a link to the enforcement procedures and actions:

Municipal Code Chapter 725 includes procedures for inspection, monitoring, abatement, and enforcement measures related to stormwater pollution and illicit connections, in addition to remediation cost recovery. Ordinance language was selected from national models and for regional consistency.

In addition, the following ordinances are available for use based on the nature of the concern. These are maintained and updated using the Municipal Code link provided above:

- Chapter 215: Nuisances – addresses abandoned motor vehicles, animal or vegetable matter that has become putrid, offensive or unhealthy, filth, garbage, ashes, foul, nauseous or unclean water, etc.
- Chapter 240: Garbage and Rubbish
- Chapter 510: Streets, Sidewalks and other Public Places – addresses depositing dirt, rocks, etc. on public places and in or around storm drain structures
- Chapter 720: Wastewater Pretreatment – Article I – addresses the use of wastewater system for discharges from businesses such as restaurants, laundries, car washes, etc. and requires use of oil separators and grease traps and/or sand interceptors

**4.3.D A dry weather field screening strategy.**

1. The MS4 Operator shall conduct (or have conducted on their behalf) outfall field assessments. The screening shall be conducted during dry weather conditions (a minimum of 72 hours after the last precipitation event) to check for the presence of a discharge.



**Existing permittees:**

- a. A minimum of 60% of all outfalls shall be screened during the permit cycle.
- b. Priority areas, such as those listed in 4.3.H, shall be screened each year.

- a. Total outfalls screened during the permit cycle are reported in the Implementation Schedule.
- b. Priority areas screened annually are listed under 4.3.H and revised as needed based on findings and concern resolutions.

2. This screening shall include a checklist or other tracking device to; ensure a complete inspection of each outfall, enhance consistency, and to track the field screening. This shall be used regardless of the presence of dry weather flow. When discharge is present, the checklist or tracking device shall note the following general observations and physical characteristics at a minimum:
  - Date and time;
  - Weather conditions and temperature (air & water);
  - Color of discharge;
  - Estimate of flow rate (this may be noted qualitatively);
  - Odor;
  - Surface scum, algal bloom, floatables or oil sheen present;
  - Deposits or stains (note the color);
  - Turbidity (may be noted qualitatively);
  - Stream impact including vegetation, fish, wildlife;
  - Length of impacted stream; and
  - Notes of an obvious source of flow (such as lawn irrigation, etc.

The general observations and physical characteristics found during dry weather field screenings are recorded using the Outfall Reconnaissance Field Inventory / Sample Collection Form (Appendix E).

**4.3.E The MS4 Operator shall maintain diagnostic monitoring procedures to detect and investigate unknown non-stormwater flows as part of the dry weather screening program.** These procedures are for possible illicit discharges, and may be collected, and analyzed by a contracted lab, or similar agreement with another entity who is equipped and experienced in sample collection and analysis.

1. This diagnostic monitoring shall include sampling unknown discharge from MS4 outfalls that are found to be flowing or ponding more than 72 hours after the last precipitation event and considered to be an illicit discharge.
2. The samples shall be analyzed for relevant parameters to determine if a pollutant is involved.
  - a. Relevant parameters will need to be determined on a case by case basis depending on the nature of the discharge and what the potential sources may be.
  - b. The MS4 Operator shall have the ability to sample for and analyze the samples. This may be done through a contract lab or similar agreement.
  - c. Possible parameters sampled for and analyzed when deemed applicable include but are not limited to:
 

<ul style="list-style-type: none"> <li>● pH;</li> <li>● Oil and grease;</li> <li>● <i>E.Coli</i> or fecal coliform;</li> <li>● Surfactants or fluorescence concentration;</li> </ul>	<ul style="list-style-type: none"> <li>● Specific conductivity;</li> <li>● Ammonia;</li> <li>● Chlorine;</li> <li>● Dissolved oxygen; and</li> <li>● Fluoride/ hardness.</li> </ul>
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To investigate the nature of unknown non-stormwater flows, the Illicit Discharge Monitoring Sampling Guide provides diagnostic monitoring procedures to verify the existence of an illicit discharge. This guide includes the water chemistry parameters listed above and methods based on the following tools:

- 1) Flow Chart to Identify Illicit Discharges in Residential Watersheds;
- 2) Table of Indicator Parameters Used to Detect Illicit Discharges based on the type of discharge parameters can detect (i.e. sewage, washwater, tap water, industrial or commercial wastes);
- 3) Analysis options (field, inhouse lab at the Water Reclamation Center, or outsource to the City's contract lab) based on capacity to process the analysis within hold times.

The City references the Center for Watershed Protection Illicit Discharge Detection and Elimination (IDDE) Manual for diagnostic monitoring procedural guidance to detect and investigate illicit discharges (Appendix E).

All potential illicit discharge concerns are tracked using the city's Customer Service Center (GovQA) and/or the Illicit Discharge Incident Tracking form on file with the Stormwater Manager.

- 4.3.F The MS4 Operator shall maintain procedures for tracing the source of an illicit discharge. If initial screening indicates that a dry weather discharge contains pollutants, or if an illicit discharge is suspected from another reporting method, the source shall be traced.** These procedures shall include mechanisms to locate and follow stormwater infrastructure. A variety of investigative tools may be used as appropriate for each situation, such as, but not limited to;
- Visually following the flow;
  - Storm sewer system sampling;
  - Full storm sewer map;
  - Closed circuit television;
  - Smoke or dye tracing; and
  - Tunnel entry.

**Attach a copy of, or explain procedures for tracing the source of an illicit discharge, and mechanisms to locate and follow stormwater infrastructure.**

When an illicit discharge is found, a field survey with testing will take place, using any of the tools bulleted above, working upstream visually following the flow using the storm system map until the source of origin is located. During the inspection process, the City will seek permission and access private property to the extent allowable by law. CCTV inspection can be used when visual screening and opening manhole access is unavailable or indeterminate. Dye tracing may be used when a greywater or wastewater illicit connection is suspected. Smoke testing may also be used to find potential inflow points of illicit connections.

The City references the Center for Watershed Protection IDDE Manual for guidance on when and how to use the methods listed above to trace the source of an illicit discharge.

- 4.3.G The MS4 Operator shall maintain procedures for removing the source of the discharge.** After locating the source, the pollutant and source must be removed. While the exact procedure will depend on the source and the circumstances, The MS4 Operator must maintain any necessary contacts with appropriate entities that may be needed for these procedures (such as an environmental cleaning company). This information shall be made available to the responsible staff.

The MS4 Operator is encouraged to work with the source of the illicit discharge to remedy the situation. Possible remedies shall include:

1. Implement source control or treatment BMPs to prevent reoccurrence of the violation;
2. Remediation or restoration of affected property.

When the City is alerted to a potential illicit discharge, the City will address the concern in accordance with the Stormwater Pollution Control Ordinance, or other pertinent city codes.

The City will work with the source of the illicit discharge to remedy the situation. Discharges shall be removed by the party responsible for the violation, at no expense to the City. Violators may be required to:

- Perform monitoring, analysis and reporting;
- Implement source control or treatment BMPs to prevent violations from recurring; and
- Remediate or restore property affected by stormwater pollution.

Should the responsible party refuse to cooperate; the penalty provisions included in the Stormwater Pollution Control or other related ordinances will be enforced.

Should the source of a violation not be identified, the City will remediate and curtail the violation to the maximum extent practicable, taking into account cost-to-benefit, manpower requirements and the availability of state and federal funding. Volunteer programs such as Stream Teams, Adopt-a-Street, or Mission: Clean Stream may also be used to recruit assistance for removing illicit discharges such as floatables, litter and illegal dumping.

Details on the location and removal of illicit discharges are documented in the City's Customer Service Center concern tracking system and/or through the Illicit Discharge Incident Tracking Sheet on file with the Stormwater Manager. The responsible staff listed in Appendix A maintain contacts for City stormwater maintenance crews and City contractors that may be needed for these procedures.

**4.3.H In order to prevent further illicit discharge, the MS4 Operator shall identify priority areas such as, but not limited to:**

- Areas with evidence of ongoing illicit discharges;
- Areas with a past history of illicit discharges;
- Certain land use influencing storm sewer/ proximity of potential pollutant sources;
- Areas of higher population density;
- Neighborhoods with onsite sewage systems;
- Areas with known litter or dumping issues;
- Areas with large or increased number of citizen complaints; and
- Industrial areas

Annually, the MS4 Operators shall evaluate this priority area list and/or map and update as necessary to reflect changing priorities.

Priority Areas (Identified by the City)
Areas with evidence of ongoing illicit discharges;
Areas with a history of illicit discharges;
Areas with known litter or dumping issues; and
Areas with large or increased number of citizen complaints
Other potential priority areas the City may evaluate:
Certain land use influencing storm sewer/ proximity of potential pollutant sources;
Neighborhoods with onsite sewage systems;
Industrial areas; and
Areas of higher population density.

**4.3.I The MS4 Operator shall maintain written procedures for implementing the IDDE Program, including those components described within this section, to ensure program continuity and consistency.**

1. This shall include a description of this dry weather field screening strategy and implementation schedule to detect and address non-stormwater discharges, including discharges from illegal dumping and spills, to the permittee's system.
2. This shall include a description of how the discharge is evaluated and the possible parameters that are tested.
3. If contracted to another entity, the contact information shall be listed.

Written procedures for the dry weather field screening strategy are addressed through a variety of procedures and tools outlined below. The Implementation Schedule is provided in Appendix A. The City's goal is to combine the written procedures listed in MCM 3 into an Illicit Discharge SOP in this permit cycle.

Section 4.3.E above describes the methods used to evaluate discharges and consideration for the possible parameters for testing. The City performs dry weather field screenings using the Outfall Reconnaissance Field Inventory / Sample Collection Form (see Appendix E). The City references the Center for Watershed Protection IDDE Manual for guidance in evaluating the discharge and possible parameters to test.

- A. Outfall Priority Areas - To be efficient with staff time and resources, the City assesses MS4 outfalls in priority areas outlined in 4.3.H to achieve 60% of all MS4 outfalls within the permit cycle and modifies priority areas based on findings and concern resolution. Outfalls are also generally selected and prioritized based on age of infrastructure, areas with older sanitary lines and/or known health compliance issues. Procedures are updated as needed based on national and state regulations, discussions with staff and neighboring MS4s communities, guidance from the Missouri Department of Natural Resources and EPA websites, successes from the previous permit cycle and available funding.
- B. Illegal Dumping/Spill Concerns - potential illicit discharges are reported through volunteer programs, stream team visual surveys, the concern hotline, city employees and the online Customer Service Center form. Outfalls may serve as a starting point where specific locations are not known. Also, when the City is alerted to a potential illicit discharge, the City will address the concern in accordance with the Stormwater Pollution Control Ordinance or other pertinent City codes.
- C. Water Quality Facilities - the City performs oversight and concern-based inspections of storm water quality facilities. Visual screening of these facilities also locates potential illicit discharges such as large amounts of sediment, auto fluids, trash, grease, etc.
- D. Septic Systems - The City of Wentzville continues to prohibit new private sewer systems and package treatment plants within municipal boundaries. As areas incorporate, private sewage systems are connected to the public sanitary system where practical.

When the City is alerted to a potential illicit discharge or connection, the City will address the concern in accordance with the Stormwater Pollution Control Ordinance, or other pertinent city codes.

**4.3.J The MS4 Operator must conduct investigations in response to field screening discoveries, spills, or in response to complaints from the public, municipal staff, or adjacent MS4s.**

The investigation must work to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection.

**Responses shall meet the following investigation timelines:**

1. Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment.
2. Investigate (or refer to the appropriate agency with the authority to act) within five (5) business days, on average, any complaints, reports or monitoring information that indicates a potential illicit discharge which does not constitute a threat to human health, welfare or the environment.

3. If illicit connections or illicit discharges are observed related to, discharging to, or discharging from, an adjacent MS4 Operator's municipal storm sewer system, the MS4 Operator must notify the other MS4's Operator within 24 hours of discovery or as soon as practicable.

**Details on the timeline for investigations:**

The City of Wentzville adopts the investigation response timeline listed above with the following considerations:

- During normal business hours - Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment.
- Outside of normal business hours - Respond to all reported concerns reported through the Emergency After Hours Hotline, which are determined to constitute a threat to human health, welfare, or the environment.

Adjacent MS4	Contact person(s)	Phone number/ email
St. Charles County	Rich Gnecco, Jr.	(636) 949-7900 ext. 7160 <a href="mailto:RGnecco@sccmo.org">RGnecco@sccmo.org</a>
City of O'Fallon	Michele Gremminger	(636) 379-7632 <a href="mailto:mgremminger@ofallon.mo.us">mgremminger@ofallon.mo.us</a>
City of Lake St. Louis	Brian Schanuel, PE	(636) 265-3689 <a href="mailto:bschanuel@lakesaintlouis.com">bschanuel@lakesaintlouis.com</a>

**4.3.K The MS4 Operator shall have procedures for appropriate enforcement, this may include fines, the ability to collect cleanup and abatement costs, and actions to ensure that the permittee's illicit discharge ordinance (or other regulatory mechanism) is being implemented.**

1. The MS4 Operator shall maintain a written description of the enforcement procedure. This shall include a copy of or link to the ordinance and/or other regulatory mechanism that the MS4 Operator will use to enforce the prohibition of illicit discharges into the MS4.

Municipal Code Chapter 725: Stormwater Pollution Control is the regulatory mechanism that directly prohibits illicit discharges into municipal separate storm sewers. It includes procedures for inspection, monitoring, abatement and enforcement measures, in addition to remediation cost recovery. The ordinance is available at [www.wentzvillemo.gov/government/municipal\\_code/index.php](http://www.wentzvillemo.gov/government/municipal_code/index.php)

**4.3.L The MS4 Operator shall maintain a database, or other centralized system, to track dry weather field screenings, spills, incidents, and investigations.**

1. Tracking mechanisms shall be used for incidents, investigations, enforcement and follow up. This data shall be used to continuously evaluate the effectiveness of the IDDE program. This data shall be reviewed to determine if there is a new priority area. The MS4 Operator shall record annually at a minimum:
  - Number of outfalls screened;
  - Number of complaints received and investigated; and
  - Number of illicit discharges removed.

2. The MS4 Operator shall document all investigations to track at a minimum:
  - The date(s) the illicit discharge was observed and investigated;
  - Summary of procedures used to investigate the illicit discharge;
  - The outcome of the investigation including sample results and findings;
  - Any follow-up of the investigation including cleanup, enforcement actions, visits to confirm the illicit discharges have been removed; and
  - The date the investigation or issue was closed or resolved.

Complaints regarding potential illicit discharges are received via the City's Customer Service Center at (636) 639-2121 and the "Report a Concern" web link at [www.wentzvillemo.gov](http://www.wentzvillemo.gov). They are tracked using the City's Customer Service Center platform (GovQA electronic concern tracking system or as updated). All related files for dry weather field screenings, illicit discharge investigations and enforcement are stored in a shared drive.

**4.3.M The MS4 Operator shall inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste, this may work with part 4.1 and part 4.6 of this permit (MCM #1 and MCM #6).**

MS4 staff, businesses and the general public are informed of the hazards associated with illegal discharges and improper disposal of waste through the following BMP strategies:

- Customer Service Center (Concern Hotline)
- City Stormwater Division website at [www.wentzvillemo.gov](http://www.wentzvillemo.gov)
- Storm Drain Marking Program
- Pollution Found Doorknockers in areas of concern
- Operations & Maintenance Program Manual & Employee Training

The stormwater website and employee training advertise information on what an illicit discharge looks like and reporting procedures. In coordination with MCM #1 and #6, the City also promotes alternative disposal options for yard waste, recycling, seasonal large item pickups and household hazardous waste through training, in City newsletters and/or in the "Welcome to Wentzville" brochure available to new utility customers.

**4.3.N All MS4 Operators shall review their IDDE Program, at minimum, annually and update implementation procedures as necessary.**

**4.3.O Existing permittees: Shall evaluate their current program to ensure that it is in compliance with this permit.**

1. Any revisions to the ordinance or regulatory mechanism shall be complete in the first year of the permit cycle.
2. Maintain an updated map with the items listed above. Items not included in the current map must be added within the first 2 years of the permit cycle.

**4.3.P Newly regulated permittees: Shall develop an IDDE Program. Newly regulated permittees shall describe the IDDE program in their SWMP. The MS4 Operator shall have the program fully implemented within five (5) years of permit issuance.**

1. If the MS4 Operator needs to develop the regulatory mechanism, the ordinance or regulatory mechanism must be adopted within the first 3 years of permit coverage.
2. Develop or update a map in accordance with Section 4.3.A of this Permit. The MS4 Operator must develop or update a map with the items listed above. All outfalls shall be dry weather field screened within the first five (5) years of permit issuance.



**4.3.Q The MS4 Operator must develop and implement or maintain a training program for all municipal field staff, who, as part of their normal job responsibilities, may come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system.**

This shall include staff who may handle materials which may become an illicit discharge. This shall include discharges through spills, improper disposal, mismanagement, improper vehicle or equipment washing or rinsing. This training may be conducted with resources online and may be focused for what topics are relevant to their position.

1. Each staff shall take this training at minimum within one year of a new employee being hired.
2. The applicable staff may include the following; (unless the MS4 Operator does not have the listed department under their jurisdiction). Additional staff or departments shall be included if appropriate;
  - Fleet maintenance staff;
  - Staff at facilities with fuel, chemicals, washing of vehicles or equipment;
  - Road maintenance staff;
  - Road salt/de-icing staff; and
  - Parks, swimming pool, or golf course staff who encounter spills, equipment or vehicle washing, fueling, chemicals, etc.
3. The training dates, topics and the attendance shall be recorded.
4. Reviews of the training effectiveness shall be considered after municipal site inspections or after an incident occurs. If a certain department or facility did not perform the way they were trained, or if an issue arises that was not handled properly, the MS4 Operator should consider if the training is enough or is ineffective. The MS4 Operator shall consider ways to survey or test staff to see if the training is effective.

The City of Wentzville's training program and applicable staff are outlined in the Operations & Maintenance Program manual. Reviews of training effectiveness occur as a part of adaptive management. Pertinent findings can be provided in annual reports using the Appendix A. Implementation Schedule under Sections 5 and 6.

**4.3.R Using adaptive management the MS4 Operator shall review their IDDE Program, at minimum, annually and update implementation procedures as necessary.** This data shall be used to continuously evaluate the effectiveness of each BMP and the implementation of each BMP. Any additional BMPs shall be acknowledged in the Stormwater Management Program report.

Reviews of BMP effectiveness occur as a part of adaptive management. Pertinent findings are provided in annual reports using the Appendix A. Implementation Schedule under Sections 5 and 6.

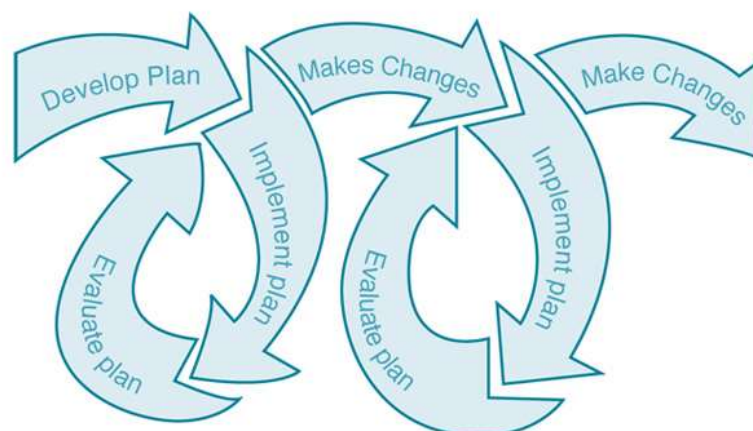


Figure 4: The Adaptive Management Process

## MCM 4. Construction Site Stormwater Runoff Control

### **4.4 The MS4 Operator shall develop, implement and enforce a program to reduce pollutants in any stormwater runoff to their MS4 from construction activities that result in land disturbance of greater than or equal to one acre.**

Reduction of stormwater discharges from construction activity disturbing less than one acre shall be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more.

#### **4.4.A The MS4 Operator shall have a law, ordinance and/or other regulatory mechanism to require construction site runoff control BMPs at construction/land disturbance sites greater than or equal to one (1) acre or less than one acre if the construction activity is part of a larger common plan or development or sale that would disturb one acre or more. The mechanism shall include sanctions which are designed to ensure compliance, to the extent allowable under State, or local law.**

Attach a copy of, or include a link to the applicable ordinance and/or other regulatory mechanism that the MS4 Operator will use to enforce the construction program:

Municipal Code Chapter 515: Erosion and Sediment Control is available at [www.wentzvillemo.gov/government/municipal\\_code/index.php](http://www.wentzvillemo.gov/government/municipal_code/index.php)

Attach a copy of, or include a link to the enforcement procedures and actions:

Municipal Code Chapter 515 includes procedures for inspection and enforcement measures related to construction site stormwater runoff controls, as well as sanctions to ensure compliance. The code references the Protecting Water Quality Field Guide for best practices.

The Engineering Department administers a Development Inspection standard operating procedure (SOP) for related inspection and enforcement procedures.

The following municipal codes are also available for use based on the nature of the concern. These are maintained and updated using the Municipal Code link provided above:

- Chapter 215: Nuisances – addresses abandoned motor vehicles, animal or vegetable matter that has become putrid, offensive or unhealthy, filth, garbage, ashes, foul, nauseous or unclean water, etc.
- Chapter 240: Garbage and Rubbish
- Chapter 510: Streets, Sidewalks and other Public Places – addresses depositing dirt, rocks, etc. on public places and in or around storm drain structures
- Chapter 725 – includes procedures for inspection, monitoring, abatement, enforcement and remediation measures related to stormwater pollution.



**4.4.B The MS4 Operator shall review pre-construction plans.** These reviews at a minimum shall:

- ☒ Incorporate the consideration of potential water quality impacts through procedures for site plan review. The site plan review procedures shall evaluate threats to water quality shall by considering, at minimum, the following factors:
  - a. Soil erosion potential;
  - b. Site slope;
  - c. Project size and type;
  - d. Sensitivity of receiving water bodies;
  - e. Discharge flow type (pipe or sheet flow);
  - f. Location of discharge point in relation to receiving water;
  - g. Proximity of the site to receiving water bodies; and
  - h. Other factors relevant to the MS4 service area.
- ☒ Use a checklist, or other listed criteria, to ensure consistency and completeness.
- ☒ Include requirements for construction site operators to select, install, implement, and maintain appropriate stormwater control measures.
  - a. This includes; temporary BMPs throughout the life of the land disturbance, and permanent BMPs which remain on site as required by local codes and ordinances.
- ☒ Consider ways to minimize disturbed areas through actions such as, phased construction requirements, temporary seeding or sodding, or erosion mats to exposed areas.
- ☒ Include requirements for construction site operators to control construction-site waste that may cause adverse impacts to water quality. This shall include at a minimum:
  - a. Discarded building materials;
  - b. Concrete truck, and mortar mix washout;
  - c. Chemicals (such as fertilizer, paint, oils, herbicides, pesticides);
  - d. Litter; and
  - e. Sanitary waste.

The Engineering Department's development review procedures include pre-construction plan review using a standard checklist to summarize compliance with the City's Engineering Design Criteria.

**4.4.C The MS4 Operator shall establish authority for site inspections and enforcement of control measures. To the extent allowable by state, federal, and local law, all MS4 Operators shall implement procedures for inspecting construction/land disturbance projects.**

The construction site runoff control program shall implement at a minimum:

- ☑ Identify priority sites for inspection based on the nature of the construction activity, topography, disturbed area, and the characteristics of soils and sensitivity of, or proximity to, receiving water.
- ☑ Construction site inspections shall include assessment of compliance with the MS4 Operator's construction site stormwater runoff control ordinance or regulatory mechanism, and other applicable ordinances.
- ☑ The inspections shall evaluate any structure that functions to prevent pollution of stormwater or to remove pollutants from stormwater and use enforcement policies to require BMPs are implemented and effective.
- ☑ Final inspection, upon completion of the land disturbance and prior to final approval of construction project. Ensure all disturbed areas have been stabilized, that all temporary erosion and sediment control measures are removed.
- ☑ The inspections conducted by the MS4 Operator shall be documented with a checklist. The checklist must include structural BMPs and check on the self-inspection which are conducted by the construction site operator. These MS4 Operator checklists may be electronic.
- ☑ Municipal Code Chapter 515 includes procedures for inspection and enforcement measures related to construction site stormwater runoff controls with sanctions to ensure compliance. The Engineering Department administers a Development Inspection SOP to attain inspection and enforcement consistency. The Construction Site SWPPP Inspection Form (checklist) is provided in Appendix F.

- 4.4.D The construction site runoff control program shall include an established, escalating enforcement policy that clearly describes the action to be taken for violations.** The program shall have written procedures to ensure compliance with the MS4 Operator's construction site runoff control regulatory mechanism. This shall include the sanctions and enforcement mechanisms the permittee will use to ensure compliance and procedures for when certain penalties, injunctions or other measures will be used.
1. The MS4 Operator must have the authority to initiate a range of enforcement actions to address the variability and severity of noncompliance.
  2. Enforcement responses to violations must consider the following criteria at minimum:
    - a. Degree and duration of the violation;
    - b. Effect the violation has on the receiving water;
  3. Enforcement actions shall be timely in order to ensure the actions are effective. These procedures and actions must be written and available for MS4 staff for consistency and training purposes.
  4. The MS4 Operator must have a minimum of two (2) enforcement actions they are able to use.
  5. Possible enforcement actions include, but are not limited to:
    - Stop Work orders;
    - Verbal education or educational materials given to the construction site operator;
    - Written warnings or notice of violation;
    - Bonding or escrow requirements;
    - Fines/ penalties; and
    - Denials for previous non-compliance or current non-compliance at other sites.

Attach a copy of, or include a link to the escalating enforcement policy.

Municipal Code Chapter 515 includes procedures for inspection and enforcement measures related to construction site stormwater runoff controls, with sanctions to ensure compliance. The ordinance is available at [www.wentzvillemo.gov/government/municipal\\_code/index.php](http://www.wentzvillemo.gov/government/municipal_code/index.php)

The Engineering Department administers a Development Inspection SOP for inspection and enforcement procedures. The City may pursue enforcement including, but not limited to, the actions listed above in 4.4.D.5.

**4.4.E The MS4 Operator shall require the construction site operator to conduct inspections at minimum:**

1. Every fourteen (14) days, when construction is active.
2. Within 72 hours of any storm event, and within 48 hours after any storm event equal to or greater than a 2-year, 24-hour storm has ceased.

Checklists used for these inspections conducted by construction site operators shall either be submitted to the MS4 Operator, or the MS4 Operator shall verify that these inspections are being conducted by the construction site operator checklists during MS4 Operator inspections.

**Attach a copy of, or include a written description of the inspection requirements for construction site operators:**

Municipal Code Chapter 515 includes procedures for submittal of SWPPP inspection reports to be available upon request by the City. A template SWPPP Inspection Report for contractors (in Appendix F and as amended) is provided at pre-construction meetings and is listed on the pre-construction meeting agenda for review.

Checklists used by the construction site operators are reviewed upon submission and may be verified onsite.

**4.4.F The MS4 Operator shall maintain an inventory of active public and private land disturbance sites, as defined in Section 4.4 of this permit. This may be supplemented with records such as a plan review checklist and email correspondence.** The inventory must contain:

- ☒ Relevant contact information for each project (e.g., tracking number, name, address, phone, etc.);
- ☒ Size of the project/ area of disturbance;
- ☒ If the site is a priority site/ how high of priority;

**Explain how the inventory is maintained:**

The Engineering Department inventories active land disturbance projects using a shared file drive and/or centralized permitting system.

**4.4.G The MS4 Operator shall track their oversight inspections. This may be done by retaining copies of records such as inspection checklists and email correspondence.** The MS4 Operator must make these inventories available to the Department upon request. The tracking must contain at a minimum:

- ☒ Inspection dates and time;
- ☒ Inspector name;
- ☒ Inspection findings; and,
- ☒ Follow up actions and dates, including corrective actions and enforcement actions.

**Explain how the tracking is maintained:**

Tracking is maintained by Engineering Department staff retaining the Development Construction Site SWPPP Inspection Forms and correspondence.



**4.4.H Existing permittees: Review the Stormwater Management Program including ordinances, permitting procedures, review procedures, inspection procedures and enforcement procedures to ensure compliance with these requirements.** Any changes necessary to be in compliance with this permit shall be completed within the first year of this permit issuance. The inventory of active sites must be updated as new projects are reviewed and projects are completed. If the MS4 Operator needs to develop this inventory, it shall be completed within one (1) year of this permit issuance.

**4.4.I Newly regulated permittees: If the MS4 Operator needs to develop this construction site runoff program, the SWMP shall describe the construction site stormwater plan and scheduled implementation.** Development of this program shall be completed within the first three (3) years of the permit issuance. If the MS4 Operator's ordinance or regulatory mechanism is already developed, the permittee shall include a copy of the relevant sections with the SWMP.

For new permittees, the inventory must be completed within one (1) year of permit issuance and then updated as new projects are permitted.

**4.4.J The Stormwater Management Program must include procedures for the MS4 Operator to receive and consider information submitted by the public about land disturbance sites.** This may be in combination with 4.2.D of this permit.

As MS4 Operator, the City utilizes a Customer Service Center platform (GovQA electronic concern tracking system or as updated) at (636) 639-2121 and the "Report a Concern" web link at [www.wentzvillemo.gov](http://www.wentzvillemo.gov) to receive and consider information submitted by the public about land disturbance sites. Related correspondence files are stored in this platform, or in the development project file located on a shared drive.

**4.4.K The MS4 Operator shall provide, or support access to, construction site runoff control training for MS4 inspectors and plan reviewers at minimum once during this permit cycle.** This education shall be tracked or documented.

Training is documented in the Implementation Schedule and reported annually. The following education and audiences are planned. Training topics, schedule and training resources are subject to change to be responsive to concern needs, changes in staff/responsibilities, and availability of new training resource materials, etc.

Staff & Department	Topic(s)	Training Provider / Method
Inspectors - Engineering, Building & Stormwater	Construction Site Runoff BMPs/SWPPP: inspection, maintenance, enforcement and/or tracking procedures	Supervisor or MS4 Operator / Onsite, In-Person or Video
Plan Reviewers - Engineering	Construction Site Runoff BMPs/SWPPP: BMP selection, construction methods, procedures for plan review and/or tracking	Supervisor or MS4 Operator / Onsite, In-Person or Video

**4.4.L The MS4 Operator must provide written procedures outlining the local inspection and enforcement procedures to their inspectors to ensure consistency among the inspections.**

Attach a copy of, or include a written description of the local inspection and enforcement procedures to their inspectors to ensure consistency among the inspections.

Municipal Code Chapter 515 includes procedures for inspection and enforcement measures related to construction site stormwater runoff controls with sanctions to ensure compliance. The ordinance is available at [www.wentzvillemo.gov/government/municipal\\_code/index.php](http://www.wentzvillemo.gov/government/municipal_code/index.php)

The Engineering Department administers a Development Inspection SOP that is provided to inspectors for inspection and enforcement procedures.

**4.4.M Using adaptive management, all MS4 Operators shall review, at minimum annually, their Construction Site Stormwater Runoff Control Program and evaluate the ordinances, review procedures, inspection procedures, enforcement procedures, receipt of public information procedures, and effectiveness of training procedures to ensure compliance with these requirements and determine if changes are needed.** This annual review may include but is not limited to:

1. Evaluating the most common violations, how the violations are handled, how many are escalated;
2. If the education program can assist in reducing violations;
3. Determining if the site plans match the sites when violations arise or if additional items need to be evaluated at plan review;
4. Assessing public complaints being addressed in a timely manner; and
5. Evaluating if the inspections are thorough and consistent across different sites.

Any additional BMPs shall be acknowledged in the SWMP.

Reviews of program, ordinance and procedure effectiveness occur annually as a part of adaptive management. Pertinent findings are provided in annual reports using the Appendix A. Implementation Schedule under Sections 5 and 6.

## MCM 5. Post-Construction Stormwater Management in New Development and Redevelopment

The MS4 Operator shall continue or develop, implement, and enforce a program to address the quality of long-term stormwater runoff from new development and redevelopment projects that disturb equal to and greater than one acre, including projects less than one acre that are part of a larger common plan of development or sale that would disturb one acre or more and that discharge into the regulated MS4.

The MS4's program shall ensure that controls are in place that have been designed and implemented to prevent or minimize water quality impacts.

**4.5.A The MS4 Operator shall maintain and utilize an ordinance(s) or other regulatory mechanism(s) to address post-construction runoff from new development and redevelopment projects to the extent allowable under state or local law for sites equal to or greater than one acre including projects less than one acre that are part of a larger common plan of development or sale.** The goal of this approach is to arrive at designs that protect sensitive areas, minimize the creation of stormwater pollution, utilize BMPs that effectively remove stormwater pollution, and attempt to maintain pre-development runoff conditions.

The MS4's program shall ensure that controls are in place that have been designed and implemented to prevent or minimize water quality impacts from stormwater, after construction.

1. If adopting a set of standards from another MS4 or other established standards, the MS4's ordinance may incorporate by reference, therefore the MS4 does not need to incorporate the entire guidance into their codes.
2. This program may be accomplished through one or multiple ordinances or regulatory mechanisms.

Description, and a copy of, or link to, the ordinance and/or other regulatory mechanism that the MS4 Operator uses to enforce the post-construction program:

Municipal Code Chapter 505.200 is the regulatory mechanism that adopts Engineering Design Criteria (EDC) and City Standard Specifications and Construction Details (SSCD). This code is available on the City's website at [www.wentzvillemo.gov/government/municipal\\_code/index.php](http://www.wentzvillemo.gov/government/municipal_code/index.php)

The EDC and SSCD are available under the City's website Engineering Department link: [www.wentzvillemo.gov/departments/public\\_works/construction\\_and\\_development.php](http://www.wentzvillemo.gov/departments/public_works/construction_and_development.php)

EDC Chapter 6: Design Requirements for Storm Drainage Facilities outlines post-construction controls. This includes site plan review and detention and water quality treatment specifications designed to minimize water quality impacts. Design standards are reviewed for consideration of updates that improve consistency, clarity, and BMP performance, and reduce maintenance.

**4.5.B The MS4 Operator shall continue or develop a strategy to minimize water quality impacts. This shall include a combination of structural and/or non-structural controls (BMPs) appropriate for the permittee's community.**

1. Structural controls include but are not limited to; extended detention basins, grass swales, bio-retention, permeable surfaces, sand filter basins, stormwater planters, proprietary BMPs. The ordinance or regulatory mechanism for structural post-construction controls, or water quality facilities, shall include:

- ☑ Adoption or development of numeric or technical performance and/or design standards to control post construction stormwater discharges.
- ☑ These post-construction stormwater standards are for designing, installing, implementing, and maintaining stormwater control measures which may include, but are not limited to BMPs that; infiltrate, evapo-transpire, harvest, detain, retain, and/or reuse stormwater.
- ☑ The MS4 Operator must adopt or maintain local stormwater discharge design standards that consider parameters such as; site discharge volume, rate, duration and frequency for new development and redevelopment sites with the intent to minimize the impact of stormwater runoff on water quality.

**Description of the strategy used:**

The EDC design standards target site discharge volume, rate, and duration. New development and re-development projects must provide stormwater channel protection and flood detention if they are determined to have a differential runoff greater than 2 cubic feet per second (cfs) for the 15-year, 20-minute storm event. Water quality treatment is required in applicable new and re-developments greater than one acre. In addition, erosion protection is required in engineered channels and at pipe outfalls to reduce sediment generation in these high stress areas.

**Channel Protection Volume (CPv)** - If required, 24-hour extended detention of the 1-year, 24-hour storm minimizes stream channel erosion. The rationale for this criterion is that runoff will be stored and released in such a gradual manner that critical erosive velocity during bankfull and near-bankfull events will seldom be exceeded in downstream channels.

**Flood Detention Volume ( $Q_2$ ,  $Q_{25}$ )** - when required, runoff shall be detained so that the post-developed peak flow from the site does not exceed the existing peak flow for the 2-year, 24-hour event and the 25-year, 24-hour event.

**Water Quality Volume (WQv)** - standards include strategies and technologies to address the storage and water quality treatment of 90% of the recorded daily rainfall events. In numerical terms, this is equivalent to 1.14" of rainfall multiplied by the site area and runoff coefficient. Structural water quality BMP groups include items in the table below.

Water Quality BMPs (Structural)
Stormwater Ponds
Stormwater Wetlands
Infiltration Practices
Filtering Practices
Open Channel Practices
Riparian Buffer Widening

Figure 5: Water Quality BMPs (Structural)



2. Non-structural controls include but are not limited to; stream buffers, no mow zones, preservation of open spaces, tree preservation, impervious cover reduction, land use planning, and low impact development. The ordinance(s) or regulatory mechanism(s) for non-structural post-construction controls, shall include:

- ☒ Adoption or development of preventative actions that involve management and source controls such as, but not limited to:
- Policies and ordinances that provide requirements and standards to direct development to identified areas;
  - Protection of sensitive areas such as wetlands and riparian areas;
  - Maintain and/or increase open space (which may include a dedicated funding source for open space acquisition);
  - Maintain requirements for buffer zones along water bodies;
  - Require minimizing impervious surfaces;
  - Require minimizing disturbance of soils and vegetation;
  - Policies or ordinances that encourage infill development in higher density urban areas, and areas with existing infrastructure;
  - Programs which incentivize the use of green infrastructure;
  - Requirements for minimization of directly connected impervious areas; and
  - Tree preservation ordinances.

**Description of the strategy used:**

Wentzville's planned growth policies described below serve as non-structural controls to direct growth to identified areas, protect sensitive areas, increase open space, encourage infill development, and minimize impervious surfaces and the disturbance of soils and vegetation, etc.

**Engineering Design Criteria and Land Use Plan Reviews**

EDC standards are designed to minimize impervious surfaces and incentivize redevelopment (whereby reducing or eliminating detention/channel protection requirements). Non-structural credits outlined in Chapter 6 offer stormwater management options that encourage low-impact development and multiple preventative actions listed above.

<b>Water Quality Credits (Non-structural Incentives)</b>
<b>Natural Area Conservation</b>
<b>Disconnection of Rooftop Runoff</b>
<b>Disconnection of Non-rooftop Impervious Area</b>
<b>Sheet Flow to Buffer</b>
<b>Open Channel Use</b>
<b>Environmentally-sensitive Development</b>
<b>Impervious Cover Reduction</b>

Figure 6: Water Quality Credits (Non-structural Incentives)



A Channel Assessment and Channel Condition Scoring Matrix are also submitted for projects crossing over or under a natural channel in order to inform the crossing design. To reduce sedimentation and stream degradation, grade controls are used in receiving streams at crossings and pipe outfalls.

Land use plan reviews and policy promote minimizing soil/vegetation disturbance and impervious surfaces, and increasing green space near sensitive areas.

### **Comprehensive Land Use Plan**

The City of Wentzville has adopted a Comprehensive Plan titled "A Community's Vision" to provide for organized and sustainable growth within the Planning Boundary (adopted 2018, with an update slated for 2022). The Comprehensive Plan includes areas designated for development, as well as areas of open space for floodplain, parks and recreation. Areas designated for development are: Commercial; Office; Industrial; Institutional; Transitional; Neighborhood Commercial; and Residential, including high-density, medium to high-density, medium-density and low-density.

The goals and objectives of the Comprehensive Plan are far-reaching and varied. The entire plan including goals, objectives, and action steps are available on the City's website at:

[www.wentzvillemo.gov/departments/community\\_development/planning\\_and\\_zoning](http://www.wentzvillemo.gov/departments/community_development/planning_and_zoning)

The following goals and objectives are pertinent to this MCM:

- Encourage infill development, as appropriate, to maximize utilization of existing infrastructure and land resources.
- Preserve natural physiographic features, i.e., woods, prairie lands, stream valleys, and contours to the greatest extent possible through creative site planning.
- Use natural areas, creek channels, and associated floodplain areas, drainage areas and stormwater structures/basins, existing parks and play fields, streetscapes, and underutilized lands to create an integrated city wide open space system. An action item is included to acquire public pedestrian easements within common ground areas of Wentzville subdivisions, under the plat approval process, which connect to public sidewalks for the construction and maintenance of a public pedestrian trail network.
- Preservation and conservation of mature trees and existing tree masses and canopies in order to protect existing natural resources, minimize damage and destruction via development, provide shade, protect wildlife habitat, reduce air pollution, stabilize existing soils, buffer and screen, and generally enhance the City of Wentzville's physical and aesthetic environment, thereby generally protecting and enhancing the quality of life of the City's residents. A Municipal Tree Preservation Ordinance has been approved (see below) and a Natural Resources Map has been created to indicate preservation and conservation areas, waterways, wetlands, etc.

In accordance with the Comprehensive Plan, zoning ordinances have been and will continue to be reviewed and modified to meet the plan's goals and objectives. Ordinances that apply to this MCM include the following:

### **Natural Watercourse Protection Ordinance**

The City approved this ordinance in 2008 to help protect natural watercourses and provide minimum standards and setbacks for riparian buffers identified on the Natural Watercourse Protection Map (25', 50', or 100' buffer) based on stream size. These regulations and standards help minimize water quality impacts to sensitive areas by promoting the protection of natural watercourses and riparian buffers, minimizing encroachment, reducing impervious area, absorbing peak flows and filtering or settling pollutants in stormwater runoff.

### **Tree Preservation, Planned Developments, and Parks**

In 2009, the City approved Ordinance #2999 that created a Tree Board and guides the planting, maintenance, and removal of trees and other vegetation on public lands. Ordinance #3001 was also adopted for tree preservation in affected developments. Currently, all non-exempt subdivisions having:

- 15% to 50% of the total site in woodlands must preserve a minimum of fifteen percent (15%) of the total site in woodlands.
- More than 50% of the total site in woodlands must preserve a minimum of twenty-five percent (25%) of the total site in woodlands.

Tree preservation areas and landmark trees are delineated on preliminary plats and located in common ground or tree preservation easements. Performance guarantees are established by the developer and protective methods and signage are also used during construction activities. Floodway and Floodway Fringe Districts (Municipal Code Chapter 415) also restrict certain land uses in the floodplain and floodway.

Planned zoning regulations and existing overlay zoning districts ordinances (Municipal Code Chapter 405) also require a minimum amount of open space in new developments in the City's commercial districts. This is accomplished through enhanced buffers, 25% of open space being reserved for tracts one acre or more, 20% of lots greater than four acres, and replacement or new deciduous tree canopy. (Chapters 405.165 and 405.170)

Planned development zoning maintains or increases open space and preserves existing natural features by providing greater flexibility in site design and development techniques that are not possible with conventional zoning. This offers opportunities to:

- Encourage more imaginative or innovative project designs;
- Embrace, promote, preserve and enhance the public and private urban forest; and
- Adapt the development to existing land features during construction.

Flexibility is in relation to lot size, dwelling size, and property line setbacks upon demonstration of achievement of functional and beneficial uses of open space areas and preservation and protection of natural features. This includes preserving, protecting, planting, maintaining, and restoring desirable tree canopy areas within a development site.

Wentzville's parklands provide a combination of benefits to the City, including the preservation of open space, stormwater management and recreation. The City will continue to purchase property for its Parks & Recreation program and actively preserve land along streams for trails by requiring common ground to be platted as a public pedestrian easement.

These planning policies, ordinances and programs continue to be in place and updated as needed. The Wentzville Municipal Code is available at [www.wentzvillemo.gov/government/municipal\\_code/index.php](http://www.wentzvillemo.gov/government/municipal_code/index.php)

- 4.5.C Pre-construction plan review shall be conducted by the MS4 Operator to assess site characteristics at the beginning of the construction site design phase to ensure adequate planning for stormwater program compliance.** The structural or non-structural controls chosen shall; protect sensitive areas, minimize the creation of stormwater pollution, and effectively reduce stormwater pollution. This can be achieved by reasonably mimicking pre-construction runoff conditions on all affected new development projects, or the permittee may achieve this goal through a method more appropriate for its community.

- ☒ The plan review process shall use a checklist. This may be part of the same plan review in MCM 4.
- ☒ The plan review process shall evaluate non-structural BMP selection first, such as comprehensive plans, zoning ordinances, buffer strips, and/or maximization/preservation of open space. Non-structural BMPs primarily prevent stormwater runoff from a site, which could influence the options for structural BMPs which help mitigate the stormwater related impacts after they have occurred.

**Description of the strategy used:**

The site plan review process includes application of the non-structural post-construction controls (i.e. the Planned Growth Ordinances and Policies listed above).

The improvement plan review process evaluates structural BMPs and non-structural BMP credits and incentives at affected developments. City engineers review plans to determine the site conditions before, during and after construction. This includes the pre- and post-construction hydrology, BMP selection, phasing of BMP installation and maintenance, and review of long-term maintenance plans and covenants as described below.

**4.5.D The MS4 Operator shall have ordinances or similar enforcement mechanisms to ensure adequate long-term operation and maintenance (O&M) of the selected BMPs, including, as appropriate, agreements between the MS4 Operator and other parties such as post-development landowners or regional authorities.**

- ☒ Long term O&M shall be addressed during the plan review and approval process.
- ☒ Copies of O&M manuals shall be retained by the party responsible for the post-construction BMP, and with the MS4 Operator. This may be done electronically.

**Description of the strategy used:**

Municipal Code Chapter 505.200 referenced above is the regulatory mechanism that ensures long-term operation and maintenance of stormwater control BMPs through EDC standards. The EDC Chapter 6 outlines requirements for developers to submit a stormwater quality facility (structural BMP) Maintenance Plan and record a Stormwater Maintenance Covenant prior to construction permit issuance. The plan includes:

- The person(s) or entity responsible for maintenance;
- Drawing and description of the BMP facility(s)
- Routine seasonal and annual inspection and maintenance procedures
- Non-routine maintenance procedures (less frequent such as dredging or structural repairs)
- Inspection and maintenance logs and record keeping procedures to track and record compliance with the Operation and Maintenance Plan.

The Stormwater Maintenance Covenant is recorded with reserved easement areas and requires long-term operation and maintenance. This is transferred to the property owner or neighborhood association in perpetuity. The City keeps agreements and maintenance plans on file for 100% of installed BMPs to track compliance.

Annual inspection and maintenance reports are requested to be submitted to the City annually in accordance with the Operations & Maintenance Plan and recorded covenant.

For municipally-owned and operated water quality BMPs, the City has Operations and Maintenance Plans on file and currently uses the General Revenue fund for inspection and maintenance of BMPs.

**4.5.E The MS4 Operator shall inspect, or require inspection of, each water quality structural and non-structural water post construction BMP according to the following at minimum:**

- ☒ A minimum of one (1) inspection shall be conducted during construction, and one (1) inspection before the site is finalized, to verify water quality facilities are built as designed and any applicable boundaries or practices for non structural BMPs are being observed. This may be conducted in combination with MCM 4 inspections.
  - a. The MS4 inspector shall have access to the approved plans to ensure proper installation.
- ☒ A minimum of once in the first three years after the installation by the MS4 Operator.
- ☒ Annually by the owner or operator of the post-construction BMP, or by the MS4 Operator. If completed by the BMP owner or operator, this inspection report shall be submitted to the MS4 Operator for evaluation and review.
- ☒ The MS4 Operator shall inspect a minimum of 60% of all water quality post-construction BMPs within the five year permit cycle. This must include installations with ongoing or open enforcement issues.

**Inspection Strategy:**

Inspection frequencies are noted in the Implementation Schedule. Approved BMP plans are stored on a shared drive for inspector access. City staff conduct water quality performance guarantee inspections during construction, prior to final water quality facility acceptance and within the first three years after installation. The City's Stormwater Maintenance Covenant requires annual inspection submittal by property owners/operators.

The City will evaluate ordinances and SOPs to determine if changes are needed to accomplish the inspection and enforcement goals of this BMP. If changes are needed, they will be adopted by 11/2/2023. During this time, City staff will also evaluate if a written water quality BMP inspection and enforcement SOP needs to be formalized.

**4.5.F The MS4 Operator must maintain a plan designed to ensure compliance with the MS4's post-construction water quality regulatory mechanism. This plan shall include escalating enforcement mechanisms the MS4 Operator will use to ensure compliance.**

The MS4 Operator must have the authority to initiate a range of enforcement actions to address the variability and severity of non-compliance.

**Enforcement responses to violations must consider at minimum:**

- ☒ Degree and duration of the violation;
- ☒ Effect the violation has on the receiving water;
- ☒ Compliance history of the post-construction BMP owner or operator; and
- ☒ Cooperation of the owner or operator with compliance efforts.

Attach a copy of, or include a written description of the escalating enforcement policy and mechanisms.

The City of Wentzville has the authority to initiate a range of enforcement actions under the following as governed by law, including but not limited to:

- Outreach & Education - verbal warnings and notifications (Pollution Found Doorknocker)
- Water Quality Performance Guarantee (during construction) - Notice to Correct, or the City or its contractor may perform work upon seizure of the performance guarantee.
- Municipal Code Violations - Written Notice to Correct, Written Notice of Violation, Citation, Stop Work Order, and requirements to abate/remediate and pay fines per judicial process.
- Stormwater Facility Maintenance Covenant - Written Notice to Correct, the City or its contractor may perform work and bill the property owner as a special tax bill or addition to annual real estate tax bill as governed by law.

The City will evaluate ordinances and SOPs to determine if changes are needed to accomplish the inspection and enforcement goals and timeframes of this section. If changes are needed, they will be adopted by 11/2/2023. During this time, City staff will also evaluate if a written water quality BMP inspection and enforcement SOP needs to be formalized.

**4.5.G Enforcement actions shall be timely in order to ensure the actions are effective. The MS4 Operator shall begin enforcement actions within thirty (30) days of discovering a violation.** The MS4 Operator shall maintain a minimum of two possible sanctions. These include, but are not limited to:

- ☒ Education regarding the BMP and verbal warnings;
- ☒ Written warnings or notice of violation (this includes email notification);
- ☒ Property lien; and
- ☒ Fines.

Attach a copy of, or include a written description of the enforcement actions and response times:

The City responds to public concerns and routine maintenance concerns. Staff will evaluate ordinances, SOPs and enforcement tracking to determine if changes are needed to accomplish the enforcement timeframes required in this section. If changes are needed, they will be adopted by 11/2/2023. During this time, City staff will also evaluate if a written water quality BMP inspection and enforcement SOP needs to be formalized.

**4.5.H The MS4 Operator shall maintain an inventory tracking the water quality post-construction BMPs. This inventory must contain, at a minimum:**

- ☒ Relevant contact information for the responsible person(s) or entity (e.g., tracking number, name, address, phone, etc.);
- ☒ The type of post-construction BMP;
- ☒ Applicable operations and maintenance documents;
- ☒ Date the MS4 Operator approved the construction site plan; and,
- ☒ If the water quality facility is owned or operated by the MS4, the tracking shall also include any maintenance, such as sediment clean-out or replanting.

Explain how the tracking is maintained:

Water quality post-construction BMPs (a.k.a. stormwater quality facilities) are inventoried using GIS map layers and inspection records.

- 4.5.I The MS4 Operator shall also track the post-construction BMP inspections. This may be done by retaining copies of records such as inspection checklists and email correspondence.** The MS4 Operator must make these inventories available to the Department upon request. The MS4 Operator shall track at a minimum:

- ☒ Inspection dates/times;
- ☒ Inspector name(s);
- ☒ Inspection findings; and,
- ☒ Follow up actions including all enforcement actions.

- 4.5.J Existing permittees: Evaluate the ordinances, permitting procedures, review procedures, inspection procedures and enforcement procedures to ensure compliance with these requirements and determine if changes are needed.** Any changes necessary to be in compliance with this permit shall be completed within the first two (2) years of permit issuance. The inventory of water quality facilities must be updated as new facilities are added and projects are completed. If the MS4 Operator needs to develop this inventory, it shall be completed within two (2) years of this permit issuance.

- 4.5.K Newly regulated permittees: Shall develop the ordinance or regulatory mechanism. Development of this program shall be completed within the first five (5) years of the permit issuance.** For new permittees, the inventories of public and private post-construction water quality BMPs must be completed within two (2) years of permit issuance and then updated as new projects are permitted and projects are completed.

- 4.5.L The MS4 Operator shall provide appropriate training for MS4 inspectors at minimum once every permit cycle. This may include Green Infrastructure training or specific operation of proprietary post-construction BMPs. The MS4 shall provide overall training to explain the function of both structural and non-structural post-construction water quality BMPs.**

Training will be provided to all applicable post-construction BMP inspectors in the Engineering Department. Documentation is summarized in the Implementation Schedule for annual reporting. Training topics may include BMP design, selection, inspection, operation and enforcement procedures. Topics, schedule and training resources are subject to change to be responsive to concern needs, changes in staff/responsibilities, and availability of new training resource materials, etc.

- 4.5.M Using adaptive management, all MS4 Operators shall review, at minimum annually, their Post-Construction Site Stormwater Management in New Development and Redevelopment Program and evaluate effectiveness of the overall program and determine if changes are needed.** This annual review may include but is not limited to:

The City qualitatively reviews program's effectiveness using some or all of the indicators listed below:

- ☒ Reviewing the number and types of developments;
- ☒ How many BMPs were installed/inspected;
- ☒ The amount of watershed area or water quality volume being treated;
- ☒ The types of violations found and how frequently; and
- ☒ How education could improve the effectiveness of the program.

Additional programmatic BMPs shall be acknowledged in the Stormwater Management Program Report.

Reviews of program effectiveness occur as a part of adaptive management. Pertinent findings are provided in annual reports using the Appendix A. Implementation Schedule under Sections 5 and 6.



## MCM 6. Pollution Prevention/Good Housekeeping for Municipal Operations

### **4.6 The permittee shall develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.**

#### **Operations and Maintenance (O&M) Program**

The City implements an Operations and Maintenance Program for stormwater pollution prevention and good housekeeping for municipal operations to prevent or reduce pollutant runoff from municipal operations. Related to MCM 1, targeted pollutants are those potentially generated by municipal operations including the following. Water quality monitoring may help refine or prioritize target pollutants over the permit cycle.

- Sediment,
- Litter and trash containment
- Vehicle oil/grease/fluids
- Sodium chloride
- Fertilizers and pesticides.

The Operations and Maintenance Program Manual (Appendix F) is tailored to specific City departments and facilities. It outlines employee training for departments and divisions that have roles related to stormwater pollution controls and good housekeeping per 4.6.A. below. Directors or supervisors in the following departments and divisions are responsible for implementing and evaluating their current O&M Program to minimize or prevent stormwater pollutants:

- Engineering/Stormwater
- Parks and Recreation
- Public Works
  - Fleet & Facility Operations
  - Streets
  - Wastewater
  - Water

Best Management Practices (BMPs) listed in the Manual and measurable goals described in this section and in the Implementation Schedule are based on national and state regulations, water quality and operational needs observed in the last permit cycle, and applicability to the City of Wentzville's municipal operations. This decision process includes consideration from existing operation and maintenance procedures, staff input and available training materials and resources.

Each applicable department will assess their municipal operations for associated stormwater impacts. The assessment will identify existing and potential pollutant sources and methods of reduction or elimination of identified pollutants. The following decision process may be used to change existing municipal operations to meet this objective:

1. Review current operation methods, associated pollutants and possible alternatives
2. Determine feasibility of operational changes
3. Estimate probable cost of implementation
4. Departmental review of Cost/Benefit Analysis
5. Implement changes if budget allows
6. Request additional funds if necessary
7. Financial appropriation if necessary

- 4.6.A The MS4 Operator shall maintain and utilize an employee training program for MS4 municipal operations staff. The training shall be given at minimum annually to all MS4 staff who work with material handling, at MS4 owned or operated vehicle/equipment maintenance areas, storage yards, and material storage facilities.** This may be broken up into staff units, or by applicable topics.

#### **Operations and Maintenance (O&M) Training**

Each department creates and implements a training program tailored for their operations. The training program shall consist of new staff orientation and annual training targeting staff who work with material handling, at MS4 owned or operated vehicle/equipment maintenance areas, storage yards, and material storage facilities. The training offers an opportunity for feedback from employees regarding the applicability and effectiveness of the O&M program. The goal for this permit cycle is to promote and/or conduct trainings annually or as needed in accordance with the department's O&M Program. Training programs will also be updated to incorporate new parks, city facilities, or operations as needed.

The Engineering Department and Stormwater Division will assist individual departments by compiling the O&M Program: Stormwater Pollution Prevention Manual and training resources from St. Charles County, EPA, Missouri Department of Natural Resources, Center for Watershed Protection, or other applicable authorities; and coordinating interdepartmental training opportunities.

The Stormwater Management Coordinator will seek opportunities to coordinate the training programs with the outreach programs developed for MCM 1: Public Education and Outreach and MCM 3: Illicit Discharge Detection and Elimination.

- 4.6.B The training shall be used to prevent and reduce stormwater pollution. The training shall cover a minimum of the following topics/ activities (if applicable to the MS4):**

1. Vehicle and equipment washing;
2. Fluid disposal and spills;
3. Fleet, equipment, and building maintenance;
4. Park and open space maintenance procedures (including fertilizer, herbicide, pesticide application);
5. New construction, road maintenance, and land disturbances;
6. Stormwater system maintenance;
7. MS4 operated salt and de-icing operations;
8. Fueling;
9. Solid waste disposal;
10. Street sweeper operations; and
11. Illicit Discharges.

The O&M Program and Manual continues to address the following municipal operations and categories. The department(s) currently responsible are noted. Training topics applicable to each Division are listed below and may be updated according to changes in operations. Training methods include pollution prevention DVDs, onsite training, and/or online resources. Methods depend on previous concerns, seasonal operations, new facilities and changes to the O&M Program to improve overall effectiveness.

Department	Division	Topics (corresponding to list in 4.6.B)
Engineering	Engineering	1, 2, 5-9, 11
	Stormwater	1-11
Parks & Recreation	Admin/Project Management	1-9, 11
	Facility Maintenance & Horticulture & Forestry	1-9, 11
	Recreation & Aquatics	1-4, 8, 9, 11
Public Works	Facility Operations	1-5, 7-9, 11
	Fleet	1-3, 7-9, 11
	Solid Waste	1-3, 8-9, 11
	Streets & Signals	1-3, 5-11
	Wastewater	1-5, 7-9, 11
	Water	1-5, 7-9, 11

**4.6.C The MS4 Operator shall:**

1. Maintain material to use in the training program, such as those available from the EPA, the state, or other organizations.
2. Maintain written procedures for the training program. Include a description of how this training will coordinate with all other minimum control measures (such as Illicit Discharge), monitoring and TMDL implementations where applicable.
3. Maintain a written schedule to offer topic specific training when it is appropriate. Such as, swimming pool discharges in the summer, leaf disposal in the fall, proper salt clean-up and usage in the winter.

1. The Stormwater Division assists individual departments and divisions by compiling training resources from Excal Visual, St. Charles County, EPA, Missouri Department of Natural Resources, Center for Watershed Protection, and/or other applicable authorities and coordinated training opportunities.
2. Training procedures are outlined in the O&M Program Manual, as compiled by the Stormwater Division and updated by responsible parties. Training includes topics such as illicit discharge detection, alternative disposal options, current trends in best practices and SWMP goals.
3. Topic-specific trainings and schedule are outlined in the O&M Program Manual. Most training occurs in the first quarter yearly prior to warm weather maintenance activities. Road deicing and salt storage training typically occurs prior to winter maintenance activities.

**4.6.D The MS4 Operator shall maintain a list of all municipal operations/facilities that are impacted by this operation and maintenance program.**

This shall include a minimum of the following if owned and operated by the MS4 and if applicable to the MS4:

1. Maintenance yards;
2. Fleet or maintenance shops, including parks department;
3. Storage yards;
4. Parks, golf courses, swimming pools, and splash pads;
5. Municipal parking lots;
6. Salt/sand storage locations;
7. Snow disposal areas; and
8. Other locations expected to contribute floatables and/or pollutants.

The O&M Program Manual is maintained and updated to include all municipal operations and facilities owned and operated by the MS4 that are impacted by this permit. The facilities department(s) currently responsible are noted below.

Facility	Address (63385)	Division Responsible
Midwest International Research Institute (Business Incubator)	310 W. Pearce Blvd.	Facility Operations
City Hall & Law Enforcement Center Campus	1001 Schroeder Creek Blvd.	Stormwater & Facility Operations
Heartland Park	100 William Dierberg Dr.	Parks and Recreation
Ice Arena	910 Main Plaza Dr.	Parks and Recreation
Memorial Park	1419 Kathleen Dr.	Parks and Recreation
Municipal Parking Lots	Varies, list maintained by Streets	Streets
Peruque Valley Park	1335 S. Point Prairie Rd.	Parks and Recreation
Progress Park	968 Meyer Rd.	Parks and Recreation
Public Works	200 E. 4th St.	All Public Works Divisions
Rotary Park	2577 W. Meyer Rd.	Parks and Recreation
Splash Station	1141 Peine Rd.	Parks and Recreation
Splash Station Storage Area	1141 Peine Rd.	Streets
Water Control Building	802 E. Pearce Blvd.	Water
Water Reclamation Center	2455 Mette Rd.	Wastewater
Water Towers & Wells	Varies, list maintained by Water	Water
Wentzville Recreation Center (WREC)	1001 Schroeder Creek Blvd.	Parks and Recreation

**4.6.E The MS4 Operator shall maintain a list of industrial facilities the MS4 Operator owns or operates which are subject to NPDES permits for discharges of stormwater associated with industrial activity. The list shall include the permit number or a copy of the No Exposure Exemption Certification (if applicable) for each facility.**

This includes; municipal projects with a land disturbance permit, wastewater facilities, airports, etc. NPDES permitted facilities not owned or operated by the permittee are not required to be part of the list; however, the MS4 Operator should be familiar with all such facilities in their MS4 service area as they may signify a priority area for the IDDE program.

The City of Wentzville does not operate any industrial facilities subject to NPDES permits for stormwater discharges. The Wentzville Water Reclamation Center is a municipal wastewater treatment facility covered by Permit MO-0093599 for wastewater discharges. Therefore, wastewater department discharges are not covered under this MS4 permit, per Section 1.3. The Wastewater Department's permit and independent reporting address reduction of inflow and infiltration and discharge monitoring, etc. The department also conducts employee trainings annually and maintains operator certification through the Department of Natural Resources.

Facility	Permit Number / No Exposure
Water Reclamation Center	MO-0093599

**4.6.F The MS4 Operator shall develop or maintain controls for reducing or eliminating the discharge of floatables and pollutants from municipal facilities listed in Section 4.6.D and 4.6.E. These controls shall include at a minimum, where applicable:**

The O&M Program Manual is maintained and updated to include controls outlined below:

- ☒ A list of potential pollutant sources at each facility, such as materials used and stored on site;
- ☒ A minimum of annual inspections of all municipally owned or operated facilities for stormwater issues;
  - a. Records shall be kept for inspections and follow up. This may be a checklist, and may be electronic;
- ☒ Use of structural controls/BMPs to reduce or prevent pollutants from entering waters of the state or into another MS4 where needed.
  - a. A map with descriptions of these BMPs shall be maintained for each facility;
- ☒ All paints, solvents, petroleum products, and petroleum waste products (except fuels) under the control of the permittee shall be stored so these materials are not exposed to stormwater;
- ☒ Sufficient practices of spill prevention, control, and/or management shall be provided to prevent any spill of these pollutants from entering waters of the state;
  - a. This shall include spill kits when liquid product is stored at a facility; and
  - b. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
- ☒ Tracking of rock salt/brine or other deicer usage;
- ☒ Maintaining municipal salt storage area(s) after use of rock salt, at minimum:
  - a. Sweep and/or shovel spillage in loading area and storage area, and
  - b. Unload salt hoppers or keep under cover when salt is in the hopper.

**4.6.G The MS4 Operator shall have procedures for proper disposal of waste removed from the MS4 structures and areas of jurisdiction.** This waste, shall include at minimum, if applicable to the permittee:

1. Street sweeper spoils and washout;
2. Accumulated sediment;
3. Dredged materials;
4. Floatables, trash and litter;
5. Leaves, other organic matter; and
6. Other debris.

The O&M Program Manual is maintained and updated to include procedures outlined below:

**1. Street sweeper spoils and washout**

Sweeper waste is bulked in the Public Works rear yard where it drains to a hydrodynamic separator. It is disposed at a permitted construction landfill (typically biweekly).

**2. Accumulated sediment**

This is disposed at a permitted construction landfill along with sweeper waste, or if clean, is used as fill at the Splash Station storage area using vegetated buffers or other BMPs as needed to reduce/eliminate the discharge of pollutants.

**3. Dredged materials**

The City does not typically generate dredged materials. If generated, dredged materials are allowed to dewater onsite where removal occurs if possible. This is disposed at a permitted construction landfill along with accumulated sediment, or if clean, is used as fill at the Splash Station storage area using vegetated buffers or other BMPs as needed to reduce/eliminate the discharge of pollutants.

**4. Floatables, trash and litter**

This type of solid waste is disposed in solid waste dumpsters at City facilities. Collection and disposal of solid waste and recycling is managed through the City's Solid Waste and Recycling contractor for proper disposal.

**5. Leaves, other organic matter**

Waste generated from municipal operations is composted at the Splash Station storage area, or other area designated by the O&M responsible party, using vegetated buffers or other BMPs as needed to reduce/eliminate the discharge of pollutants. This may also be disposed of using a facility permitted by law to manage organic waste. Do not dump in or near creeks.

**4.6.H The MS4 Operator shall maintain and utilize the following procedures, at minimum, for the washing of all municipal vehicles and equipment (if applicable to the MS4):**

1. Use of any soap or detergent shall only be where there is connection to sanitary sewer or equivalent treatment; and
2. Any wash or rinse water that contains pollutants such as salt, oils, grease, sediment, grass clippings, lawn chemicals, or pesticides shall not be discharged to waters of the state or the MS4 system without appropriate treatment.
3. Any washing or rinsing activities shall be conducted in an appropriate area so the water is treated. This area(s) shall be marked on the map of the facility.

**Description of vehicle and equipment washing:**

Municipal fleet vehicles are washed at commercial car wash facilities. Larger fleet vehicles and equipment are washed in the Public Works wash bay with oil and grease separators. When these options are infeasible due to size or location of equipment, the use of best practices listed above are incorporated into the O&M Manual



- 4.6.I The MS4 Operator shall maintain written explanation of the controls, procedures, inspection schedules, and explanation of tracking of these controls.** Tracking may be done by retaining inspection reports or checklists.

Individual Stormwater Pollution Prevention Plans or one overarching Operations and Maintenance Manual for all applicable MS4 facilities may be used to comply with this requirement. If a unified document is used, each individual site shall be familiar with the document, and a copy shall be present on each site referenced in the document or available electronically.

**Explanation of controls and tracking:**

The City adopts one overarching Operations and Maintenance Manual (O&M Manual) for all applicable MS4 facilities to comply with this requirement. The O&M Manual includes BMPs specific to each department/divisions operations and materials, inspection checklists and schedules and how requirements are tracked. An individual Stormwater Pollution Prevention Plan (SWPPP) is also maintained for the Wentzville Water Reclamation Center.

The O&M Manual is available electronically/onsite with the facility's responsible party and updates are distributed annually electronically as needed.

Annually, the MS4 Operator shall evaluate the results, controls, and inspection procedures to ensure compliance with these requirements and determine if changes are needed. This evaluation may also aid in finding priority areas or pollutants in relation to MCM 3, or adding more education in relation to MCM 1.

Municipal facilities, inspection procedures and results, and controls/BMPs are evaluated by responsible parties and/or the Stormwater Manager annually as part of adaptive management. A summary of findings is reported and submitted in the Implementation Schedule under Sections 5 and 6 annually.

- 4.6.J The MS4 Operator shall maintain procedures to determine if there are impacts to water quality for new flood management projects, if applicable.** Any flood management projects shall require the protection of water quality in the standards that are used to plan, design, build, and maintain stormwater infrastructure. Flood management projects are those projects developed or designed to reduce flooding.

**Procedures to determine if there are impacts to water quality for new flood management projects:**

The Engineering Department reviews all municipal stormwater/flood management projects developed or designed to reduce flooding for water quality impacts through the plan review process using the Engineering Design Criteria. Water quality protection device(s) or practice(s) may also be recommended even when they are not required. As mentioned in MCM 5, a Channel Assessment and Channel Condition Scoring Matrix are part of plan review for projects crossing over or under a natural channel. To reduce sedimentation and stream degradation, grade controls and erosion protection are used in streams near crossings and pipe outfalls. Stormwater Pollution Prevention Plans (SWPPP) are also developed as required by Missouri Department of Natural Resources land disturbance permits. The SWPPP includes inspection and maintenance procedures for erosion and sediment controls and good housekeeping practices. Best practices for the operations and maintenance of stormwater infrastructure are outlined in the Operations and Maintenance Manual.

- 4.6.K Existing permittees: Shall evaluate the current Stormwater Management Program including training, inspection procedures, and other municipal operation procedures to ensure compliance with these requirements.** Any changes necessary to be in compliance with this permit shall be completed within one (1) year of this permit issuance.

Under the previous permit the City conducted training biannually at a minimum based on the target pollutants, site inspections, staff turnover, concerns and specific topics/activities applicable to the MS4. Moving forward, appropriate staff will be trained annually at a minimum. Updates to the O&M Program and Manual are included in the Implementation Schedule for completion within one year.

- 4.6.L Newly regulated permittees: Shall develop this program. The SWMP shall describe the pollution prevention/ good housekeeping plan and scheduled implementation.** Development of this program shall be completed within the first five (5) years of the permit issuance.

- 4.6.M Using adaptive management, all MS4 Operators shall review their Municipal Operations Program, at minimum, annually and update implementation procedures as necessary within the permit requirement.** Any additional BMPs shall be acknowledged in the Stormwater Management Program Report.

The O&M Program is collectively evaluated annually by the responsible parties and MS4 Operator to help review the applicable municipal operations, locations and BMPs that may have water quality impacts. Input is provided for updates to Best Management Practices, typical inspections and maintenance schedules and checklists as well as to help with recordkeeping. Departments submit annual reports of activities with specific training conducted, number of participants, new facilities or operations, feedback on BMPs and any changes to their O&M Program section.

These adaptive management strategies (listed in Appendix A. Implementation Schedule and under Sections 5 and 6) provides quantitative and qualitative indication of the effectiveness of the pollution prevention program for municipal operations.

## MS4 Stormwater Management Program Report

**5.3.A A report to the Department on the status of the MS4's program is due annually on or before February 28th. This report shall cover the previous year from Jan. 1 to Dec. 31. The report shall be submitted on the Department-approved, MS4 Stormwater Management Program Report form. If approved by the Department, permittees may submit the MS4 Stormwater Management Program Report using an alternative report format. The MS4 Operator shall submit the MS4 Stormwater Management Program Report containing, at a minimum:**

1. Information regarding progress toward achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practicable;
2. The status of the MS4's compliance with permit conditions;
3. Assessment(s) of the appropriateness of identified BMPs and corresponding measurable goals for each MCM;
4. A summary of results of information collected and analyzed during the reporting period, including monitoring data or quantifiable values per the MS4's measurable goals;
5. A summary of the TMDL Assumptions and Requirement Attainment Plan (ARAP), if applicable, containing the implementation status of BMPs and measurable goals specific to the TMDL ARAP or progress toward implementing the schedule for implementation of the TMDL ARAP. The summary shall also include any changes to BMPs and corresponding measurable goals;
6. If the permittee is utilizing integrated planning, the permittee shall provide a summary of the status of the integrated plan; and
7. A statement if the permittee is relying on another entity to satisfy some of the permittee's permit obligations. If applicable, the permittee shall supply the name of the entity, the name of the entity's primary contact person, and other relevant contact information.

Annual reports including Implementation Schedule progress will be submitted through the Department's eDMR system as required. This is accessible through the Missouri Gateway for Environmental Management (MoGEM): <https://dnr.mo.gov/mogem>

## Special Conditions for Total Maximum Daily Loads (TMDLs)

**6.1.A Any regulated MS4 identified in an EPA approved or established TMDL with an applicable Wasteload Allocation (WLA) shall implement steps toward the attainment of applicable WLAs in accordance with 40 CFR 122.44(k)(2) and (3).**

**6.1.B The MS4 Operator shall develop a TMDL ARAP to address the TMDL's assumptions and requirements where applicable.**

The City of Wentzville is not identified in an EPA approved or established TMDL, and is therefore not subject to this special condition. While TMDLs have not been developed for streams in Wentzville, the City takes a proactive role in preventing and reducing pollutants in receiving streams through implementation of the BMPs in the Stormwater Management Program.

Peruque Creek is currently listed on the 2020 EPA Approved 303(d) List (see Appendix C). A TMDL is scheduled to be developed in 2026-2030. This creek is listed as impaired for Aquatic Macroinvertebrate Bioassessments/Unknown (W) due to Nonpoint Source and Dissolved Oxygen (W) due to Source Unknown. The City will work with the Missouri Department of Natural Resources to incorporate specific TMDL measurement procedures should the TMDL status change.

Appendix A

# **Implementation Schedule for Minimum Control Measures**

## Minimum Control Measure #1: Public Education and Outreach on Stormwater Impacts

**Target Audiences:** Residents, Developers or construction site operators and local government employees. **Optional:** homeowners or neighborhood associations

**Target Pollutants and Sources:** Trash from littering/dumping; sediment runoff from construction/land disturbance; and the improper disposal of household/yard waste, oil, grease and fluids from vehicles

### 1. STATUS OF COMPLIANCE WITH PERMIT CONDITIONS

(Summary to be provided in annual reports.)

#### Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Tracking & Adaptive Management	Implementation Schedule	Individual(s) Responsible
<b>Outreach and Education BMPs</b>				
Information on the MS4 Operator's website;	Maintain a web page with up to date information, & working links. All links shall be checked, and the page shall be updated as necessary at minimum annually. Must be maintained the entire year.	The number of hits shall be tracked. The MS4 Operator shall use this to see which messages get reactions, and if certain messages may need more education.	Ongoing Annual review by November 15	Stormwater Manager
Require installation of permanent embossed, or precast inlets with "No Dumping-Drains to Stream" or similar message.	Requirement for all new inlets in the MS4 area.	Number of inlets, the location of the inlets shall be tracked. These areas shall be noted on MCM #3 dry weather field screenings, and illicit discharge investigations as a method to determine if the markings are effective or if areas could benefit from the markings.	Ongoing	Senior Civil Engineer & Stormwater Manager
Publish articles in a local newsletter, may be electronic.	Develop topics that are group-specific and address activities and or pollutants of concern at a seasonally appropriate time. A minimum of two articles annually shall be published or emailed.	To the extent possible evaluate the pollutant before the article, and again after to see if there has been a change. Consider including a mechanism to track active response such as following the social media account or a website to visit. Track those responses to determine if the article was effective in reaching people.	Ongoing	Community Relations Manager & Stormwater Manager
Promote, host, or develop educational meetings, seminars, or trainings.	The events shall address ways attendees can minimize or avoid adverse stormwater impacts or practices to improve the quality of stormwater runoff. A minimum of two events shall be held, hosted or promoted annually. These events may address different pollutants/audiences.	Attendance and any distributed education materials shall be tracked. This shall be used to gauge interest in the topic. Consider using a questionnaire or follow-up survey to track if the attendees retained information or found the event beneficial.	Ongoing	Stormwater Manager

Targeted education campaign (via mail, email or in-person)	Minimum of one annually OR with a specific event. (Examples: Sediment control with small building permit; leaf litter email during street sweeping season, or education brochure to all businesses conducting certain activity.)	Education material distributed, or amount of people contacted shall be tracked. Follow up on if noticeable behavior has changed.	Ongoing	Stormwater Manager
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#### Involvement BMPs

Stream/lake or Watershed clean-up events; Litter clean-up events such as street or stream cleanups, park cleanup events, Mission: Clean Stream Adopt-A-Spot;	To be considered an event, the land area cleaned must be at minimum 2 acres, or 400 yards of stream/ streambank/ watershed, or 2 miles of roadside. (These may be combined such as 1 acre of land and 200 yards of stream.)	Track the area or distance cleaned (by acre, yard or lane miles), the amount of waste removed (by tonnage, cubic yard, or Stream Team bag count) and the attendance. Use the waste measurements to determine if there are priority areas for litter entering stormwater, or areas for illegal dumping.	Ongoing	Stormwater Manager
Stormwater-related speaker series	Provide a minimum of two sessions a year. These may be different speakers and/or audiences.	Record the attendance, the topic covered, and any training materials distributed. Use these numbers and interactions during the event to determine if the project or training covered a topic of interest and/or a topic that could be brought to a different or wider audience.	Ongoing	Stormwater Manager
Ongoing yard waste collection, designated yard waste collection area, household hazardous waste collection, or street sweeping program.	Provide the service as an annual occurrence or at a readily accessible location. For street sweeping, this shall be conducted at minimum twice a year.	Track the amount collected. If educational information is being used in conjunction with this activity, track for changes due to the education. Tracking can be used with illicit discharge tracking, to determine if the rate of this type of discharges or dumping was reduced.	Ongoing	Director of Public Works

#### 2. PROGRESS TOWARDS ACHIEVING THE STATUTORY GOAL OF REDUCING THE DISCHARGE OF POLLUTANTS TO THE MAXIMUM EXTENT PRACTICABLE (MEP) TO THE MS4

**List of any additional programmatic BMPs:**

#### 3. NOTICE THAT THE CITY IS RELYING ON ANOTHER GOVERNMENT ENTITY TO SATISFY PERMIT OBLIGATIONS (IF APPLICABLE)

Name of Government Entity:	N/A	Contact Info:		
Primary Contact:		Specific BMPs or MCMs Entity Implements:		



**4. SUMMARY OF STORMWATER ACTIVITIES & KNOWN CONSTRUCTION ACTIVITIES TO BEGIN DURING THE NEXT REPORTING PERIOD****5. CHANGES TO THE SWMP, BMPS OR THE MEASURABLE GOALS AND THE ITERATIVE PROCESSES THAT OCCURRED**

The Public Education and Outreach on Stormwater Impacts Program is reviewed with regards to the BMPs tracked above to evaluate their effectiveness and implementation.

EVALUATE – Do the listed education/outreach BMPs target specific audiences and pollutants likely to have significant stormwater impacts? Do the listed BMPs target pollutants that were observed at illicit discharge concerns or inspections?

EFFECTIVE – Y or N? If no, change the target pollutants or audiences or change how the BMPs are administered to better address the observed pollutants or illicit discharges. Re-evaluate. If yes, keep target pollutants and audiences the same.

CHANGES – Are implementation procedures or BMPs updates required?

Were changes made and noted?

**6. LIST OF BMPS EVALUATED AND HOW BMPS WERE DETERMINED EFFECTIVE**

Date of Review(s):

Reviewer:

BMPs EVALUATED:

## Minimum Control Measure #2: Public Participation

### 1. STATUS OF COMPLIANCE WITH PERMIT CONDITIONS

(Summary to be provided in annual reports.)

#### Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Tracking & Adaptive Management	Implementation Schedule	Individual(s) Responsible
SWMP Public Notice Period	30-day minimum public notice period for the draft permit and description of the SWMP which includes posting the SWMP online and providing a way for the public to submit comments	Track site visits. Track and respond to comments	Jan. 2021 Jan. 2026	Stormwater Manager
SWMP Public Meeting	Post meeting date, time and location on website at least thirty days prior to meeting	Track meeting attendance and topics covered	Jan. 2021 Jan. 2026	Stormwater Manager
Concern Hotline	Annually advertise and maintain hotline with concern tracking system for citizens to report pollution or stormwater issues.	Annually track the topic, location and concern received and follow-up	Ongoing	City Clerk
Stormwater Advisory Committee ( <i>optional BMP</i> )	Implement a Stormwater Management Panel with citizen representation	Track meeting attendance, topics and feedback through agendas & minutes	Ongoing	Stormwater Manager
SWMP Update to the Governing Board	Annually update the City Board of Aldermen on SWMP status, compliance and updates	Track date and method of update	Annually by December 15	Director of Engineering and/or Stormwater Manager

### 2. PROGRESS TOWARDS ACHIEVING THE STATUTORY GOAL OF REDUCING THE DISCHARGE OF POLLUTANTS TO THE MAXIMUM EXTENT PRACTICABLE (MEP) TO THE MS4

List of additional events and/or programmatic BMPs:

### 3. NOTICE THAT THE CITY IS RELYING ON ANOTHER GOVERNMENT ENTITY TO SATISFY PERMIT OBLIGATIONS (IF APPLICABLE)

Name of Government Entity:	N/A	Contact Info:		
Primary Contact:		Specific BMPs or MCMs Entity Implements:		

**4. SUMMARY OF STORMWATER ACTIVITIES & KNOWN CONSTRUCTION ACTIVITIES TO BEGIN DURING THE NEXT REPORTING PERIOD****5. CHANGES TO THE SWMP, BMPS OR THE MEASURABLE GOALS AND THE ITERATIVE PROCESSES THAT OCCURRED**

The public participation program is reviewed with regards to attendance, inquiries or concerns to determine the effectiveness of 1) how to best reach the public, 2) the mechanisms used, 3) reaching the public and the MS4 governing board; and if the community and MS4 are working together to improve water quality.

EVALUATE – Do BMPs provide opportunities for SWMP input from citizen representatives, stakeholders and volunteers?

EFFECTIVE – Y or N? If no, change strategy to better address the target audience. Re-evaluate. If yes, continue BMP to track tasks and measurable goals to see if involvement level continues or increases.

CHANGES – Are implementation procedures or BMPs updates required?

Were changes made and noted?

**6. LIST OF BMPS EVALUATED AND HOW BMPS WERE DETERMINED EFFECTIVE**

Date of Review(s):

Reviewer:

BMPs EVALUATED:

## Minimum Control Measure #3: Illicit Discharge Detection and Elimination

### 1. STATUS OF COMPLIANCE WITH PERMIT CONDITIONS

(Summary to be provided in annual reports.)

#### Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Tracking & Adaptive Management	Implementation Schedule	Individual(s) Responsible
Storm System Mapping	Continue to update GIS map with stormwater outfalls, receiving waters and MS4 boundary.  Map MS4 outfalls per new definition in accordance with 4.3.O	Track the numbering/naming system of all outfalls; dates locations were verified and/or last field surveyed; and for newly added outfalls, the date added to the storm sewer system	Ongoing  November 2023	Civil Engineer(s) Stormwater Manager
Dry Weather Field Screening Strategy	Screen priority areas, such as those listed in 4.3.H, each year.  Screen a minimum of 60% of all MS4 outfalls during the permit cycle.	Prioritize and track MS4 outfalls screened based on priority areas (i.e. areas with ongoing or a history of illicit discharges, known litter/dumping issues, or increased citizen complaints). Priority areas may be revised as needed based on findings/concern resolution.  Track the number of MS4 outfalls screened; annually review pollutants discharged, locations and the effectiveness of outreach and enforcement to determine what modifications may be needed.	Annually by November 15  Ongoing through March 2026	Stormwater Manager
Stormwater Pollution Control Ordinance	Maintain one ordinance(s) with provision for enforcement to prohibit non-stormwater discharges to the MS4	Regulatory mechanism with sanctions for enforcement continues to be in place and updated as needed to reflect new permit conditions	Ongoing	Stormwater Manager

Illicit Discharge Detection & Enforcement	<p>Conduct investigations in response to field screenings, complaints and spills.</p> <p>Document all concerns and locations and removals of illicit discharges</p> <p>Combine the written procedures listed in SWMP MCM 3 into an Illicit Discharge SOP</p>	Maintain a database or centralized system for tracking incidents, investigations, enforcement and follow-up.	<p>Ongoing</p> <p>Ongoing</p> <p>March 2025</p>	Stormwater Manager
IDDE Training Program	<p>Implement or maintain an employee training program for applicable staff in conjunction with MCM 6, and within one year of being hired.</p> <p>Topics will target staff that routinely come into contact with materials which may become, or otherwise observe illicit discharges or illicit connections to the storm system. This includes spills, improper disposal, mismanagement, improper vehicle or equipment washing or rinsing as indicated by the O&amp;M Manual</p>	<p>Continue to track the training topics in the O&amp;M Manual and the number participants.</p> <p>Review training frequency and effectiveness after site inspections or incidents. Consider ways to survey or test staff to see if the training is effective.</p>	<p>November 2022 and ongoing</p>	<p>O&amp;M Program Responsible Party</p> <p>Stormwater Manager</p>
Stormwater Pollution Prevention Outreach	<p>Annually inform target staff and the public about illicit discharges and the hazards of improper waste disposal by posting pollution detection information, alternative disposal options and/or the 24-hour Customer Service Center reporting form on the City website, in newsletter articles, using Pollution Found Doorknockers in areas of concern and/or with the O&amp;M Program Manual or Training.</p>	<p>Track outreach methods used.</p> <p>Review outreach effectiveness biennially or as needed to consider updates or enhancements to improve reaching target audiences and outreach messages</p>	<p>November 2023 and ongoing</p>	<p>Communications Manager and Stormwater Manager</p>

## 2. PROGRESS TOWARDS ACHIEVING THE STATUTORY GOAL OF REDUCING THE DISCHARGE OF POLLUTANTS TO THE MAXIMUM EXTENT PRACTICABLE (MEP) TO THE MS4

**List of any additional programmatic BMPs** (e.g. mapping of the entire storm sewer system, adopting a standard operating procedure for dry weather screening, etc.)

## 3. NOTICE THAT THE CITY IS RELYING ON ANOTHER GOVERNMENT ENTITY TO SATISFY PERMIT OBLIGATIONS (IF APPLICABLE)

Name of Government Entity:	N/A	Contact Info:		
Primary Contact:		Specific BMPs or MCMs Entity Implements:		

**4. SUMMARY OF STORMWATER ACTIVITIES & KNOWN CONSTRUCTION ACTIVITIES TO BEGIN DURING THE NEXT REPORTING PERIOD****5. CHANGES TO THE SWMP, BMPS OR THE MEASURABLE GOALS AND THE ITERATIVE PROCESSES THAT OCCURRED**

The IDDE program is reviewed with regards to new permit conditions and the BMPs tracked to evaluate their effectiveness and implementation.

EVALUATE – Are pollutants observed from concern inspections and screenings the same as those targeted by the education/outreach and enforcement BMPs and SOPs?

EFFECTIVE – Y or N? If no, change target pollutants/audiences, screening strategies, inspection and/or enforcement procedures based on types of concerns received and inspection results. Re-evaluate. If yes, maintain BMPs and SOPs based on types of concerns received and inspection results.

CHANGES – Are implementation procedures or BMPs updates required?

Were changes made and noted?

**6. LIST OF BMPS EVALUATED AND HOW BMPS WERE DETERMINED EFFECTIVE**

Date of Review(s):

Reviewer:

BMPs EVALUATED:



## Minimum Control Measure #4: Construction Site Stormwater Runoff Control

### 1. STATUS OF COMPLIANCE WITH PERMIT CONDITIONS

(Summary to be provided in annual reports.)

#### Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Tracking & Adaptive Management	Implementation Schedule	Individual(s) Responsible
Construction Site Stormwater Runoff Control Ordinance(s)	Maintain one law, ordinance and/or regulatory mechanism with sanctions to require site operators to implement, and maintain BMPs to reduce pollutants to the MS4	Regulatory mechanism continues to be in place and defines sanctions for enforcement  Update ordinance to reflect new permit conditions as needed	Ongoing	Director of Engineering
Pre-Construction Site Plan Reviews (SWPPP)	Review plans for construction projects >1 acre or smaller sites part of a larger common plan using a standardized checklist or criteria for consistency to incorporate consideration of water quality impacts such as slope, project size, proximity and sensitivity of receiving waters.	Annually track the number of engineering plan reviews. Evaluate the plan review SOP and criteria to consider ways to improve consideration of or reduce water quality impacts	Ongoing	Senior Civil Engineers
Construction Site Inspections & Enforcement	Establish and maintain authority and implement procedures for inspecting land disturbance projects including an escalating enforcement policy.  Annually track oversight inspections, corrective and enforcement action by retaining the Development Construction Site SWPPP Inspection Forms and related correspondence.  Continue to receive and consider information submitted by the public using the Customer Service Center and/or storing correspondence in the development project file.	Maintain an inventory for tracking active public and private projects including contact info, size of disturbance and site priority level.  Review SWPPP inspection reports to evaluate needs to modify inspection priorities, training or enforcement procedures to better identify priority areas, assess compliance, evaluate BMP effectiveness and improve consistency.  Respond to and annually track concerns and information received to determine if and what plan review, inspection and enforcement modifications are needed.	Update procedures by November 2023  Ongoing	Director of Engineering
Construction Site Runoff Control Training for MS4 inspectors and plan reviewers	Provide, or support access to, and track training once during the permit cycle at a minimum, or as needed	Track the staff attendance, topics and training provider/method used	November 2023	Director of Engineering & Stormwater Manager

## 2. PROGRESS TOWARDS ACHIEVING THE STATUTORY GOAL OF REDUCING THE DISCHARGE OF POLLUTANTS TO THE MAXIMUM EXTENT PRACTICABLE (MEP) TO THE MS4

**List of additional programmatic BMPs added to the SWMP** (i.e. including onsite pre-construction visits, adopting a standard operating procedure for enforcement measures, etc.)

## 3. NOTICE THAT THE CITY IS RELYING ON ANOTHER GOVERNMENT ENTITY TO SATISFY PERMIT OBLIGATIONS (IF APPLICABLE)

<b>Name of Government Entity:</b>	N/A	<b>Contact Info:</b>		
<b>Primary Contact:</b>		<b>Specific BMPs or MCMs Entity Implements:</b>		

## 4. SUMMARY OF STORMWATER ACTIVITIES & KNOWN CONSTRUCTION ACTIVITIES TO BEGIN DURING THE NEXT REPORTING PERIOD

## 5. CHANGES TO THE SWMP, BMPS OR THE MEASURABLE GOALS AND THE ITERATIVE PROCESSES THAT OCCURRED

The construction site stormwater runoff control program is reviewed with regards to the BMPs tracked above to evaluate their effectiveness and implementation.

EVALUATE – Are pollutants observed from concerns and inspections the same as those targeted by the training, inspection and enforcement BMPs?

– Do SOPs and ordinances require operators to implement and maintain BMPs to reduce pollutants to the MS4?

EFFECTIVE - Y or N? If no, change target pollutants/audiences, inspection/enforcement priorities, SOPs or ordinances based on the types of concerns received and inspection observations or results. Re-evaluate. If yes, keep target pollutants/audiences, SOPs, etc. based on types of concerns received and inspection observations/results.

CHANGES – Are implementation procedures or BMPs updates required?

Were changes made and noted?

## 6. LIST OF BMPS EVALUATED AND HOW BMPS WERE DETERMINED EFFECTIVE

Date of Review(s):

Reviewer:

*This annual review may include, but is not limited to:*

- *Evaluating the most common violations, how the violations are handled, how many are escalated;*
- *If the education program can assist in reducing violations;*
- *Determining if the site plans match the sites when violations arise or if additional items need to be evaluated at plan review;*
- *Assessing public complaints being addressed in a timely manner; and*
- *Evaluating if the inspections are thorough and consistent across different sites.*

BMPs EVALUATED: Reviews of programs, ordinance and procedure effectiveness

## Minimum Control Measure #5: Post-Construction Stormwater Management in New Development and Redevelopment

### 1. STATUS OF COMPLIANCE WITH PERMIT CONDITIONS

(Summary to be provided in annual reports.)

#### Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Tracking & Adaptive Management	Implementation Schedule	Individual(s) Responsible
Post-Construction Runoff Ordinance (Engineering Design Criteria)	Maintain ordinance(s) that adopt design standards using a combination of structural and/or non-structural controls to minimize water quality impacts in accordance with permit conditions	Regulatory mechanism continues to be in place and defines maintenance responsibilities  Update ordinance to reflect new permit conditions as needed	Ongoing	Director of Engineering
Non-Structural Post-Construction Controls (Planned Growth Ordinances and Policies)	Maintain ordinance(s) that adopt preventative actions that involve management and source controls in accordance with permit conditions such as:  Protect sensitive areas (stream riparian corridors and wetlands)  Promote green infrastructure, minimizing impervious surfaces, disturbance of soil/vegetation  Direct growth to identified areas, re-development, infill, and brownfields  Maintain/increase open space	Track application of ordinances and Comprehensive Plan objectives through land use and improvement plan reviews. Review policies & standards as part of adaptive management and update as needed.  Natural Watercourse Protection Ord. (25' buffer or more based on size) and Floodway Districts  Engineering Design Criteria and Land Use Plan Reviews and Policy  Wentzville Comprehensive Plan  Tree Preservation and Planned Development Ordinances address preservation or open space minimums. Parks & Recreation parklands increase open space	Ongoing	Director of Engineering & Director of Community Development
Pre-Construction Site Plan Reviews (Water Quality Non-structural & Structural BMPs)	Conduct plan reviews to assess site characteristics at the beginning of the design phase to ensure adequate planning for stormwater program compliance using a standardized plan review checklist.  Evaluate non-structural BMP selection first using tools such as comprehensive plans, zoning ordinances, buffer strips and/or maximization/preservation of open space.	Annually track the number of engineering plan reviews. Evaluate the plan review SOP and/or checklist to consider ways to assess compliance and/or consistency	Ongoing	Senior Civil Engineers

BMP Operations & Maintenance Plans and Agreements	Agreements and maintenance plans are maintained on file for 100% of BMPs in affected developments	Annually review O&M plan and agreement requirements. Use staff feedback for potential improvements to improve long term O&M and records retention.	Ongoing	Senior Civil Engineers
Water Quality Structural and Non-structural BMP Inspections & Enforcement	<p>Inspect, or require inspection of, each water quality structural and non-structural BMPs to meet the following permit-required number of inspections/frequencies and tracking:</p> <p>a) 1 or more during construction  b) 1 before the site is finalized (to verify they are built as designed, and any boundaries or practices for non-structural BMPs are observed)  c) 1 or more during the first three years after installation by the MS4 Operator  d) Annually by the BMP owner/operator or by the MS4 Operator  e) 60% or more of all water quality BMPs within the five-year permit cycle, including those with ongoing/open enforcement issues</p> <p>Begin enforcement action within 30 days of discovering a violation (i.e. verbal, education, notices, fines etc.)</p>	<p>Evaluate ordinances and SOPs to determine if changes are needed to accomplish the inspection and enforcement goals of this BMP. If changes are needed, adopt changes by 11/2/2023 and evaluate if a written water quality BMP inspection and enforcement SOP needs to be formalized.</p> <p>Annually review inspection reports and trends with enforcement; evaluate if inspection priorities or enforcement should be modified based on need</p>	<p>Adopt changes by 11/2/2023</p> <p>Ongoing</p>	Senior Civil Engineers & Stormwater Manager
Storm System Mapping	Continue to update GIS map with stormwater quality facilities (WQ BMPs), type, O&M files, approval dates, responsible party contacts, and maintenance activities (if MS4-owned)	Annually track stormwater quality facilities (WQ BMPs) on GIS map layers and through inspection records	Ongoing	Civil Engineer(s) Stormwater Manager
Post-construction Site Runoff Control Training for MS4 inspectors and/or plan reviewers	Provide, or support access to, and track training once during the permit cycle at a minimum. Training shall explain the function of both structural and non-structural post-construction water quality BMPs. It may include green infrastructure, operations of proprietary BMPs, etc.	Track the staff attendance, topics and training provider/method used	Ongoing	Director of Engineering & Stormwater Manager

## 2. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable (MEP) to the MS4

**List of any additional programmatic BMPs and procedures:**

<b>3. Notice that the City is Relying on Another Government Entity to Satisfy Permit Obligations (if applicable)</b>				
<b>Name of Government Entity:</b>		N/A		<b>Contact Info:</b>
<b>Primary Contact:</b>				<b>Specific BMPs or MCMs Entity Implements:</b>
<b>4. Summary of Stormwater Activities &amp; Known Construction Activities Scheduled to Begin During the Next Reporting Period</b>				
<b>5. Changes to the SWMP, BMPs or Measurable Goals and the Iterative Processes that Occurred</b>				
<p><b>Iterative Process: Ordinances, Procedures and Enforcement</b>  EVALUATE – Do procedures, agreements and ordinances ensure controls and strategies are in place and maintained to prevent or minimize water quality impacts or incentivize planned growth?  EFFECTIVE – Y or N? If no, change procedures, agreements or ordinances based on types of controls ineffectively used or maintained. Re-evaluate. If yes, continue BMPs and strategies.  CHANGES – Are implementation procedures or BMPs updates required?</p> <p>Were changes made and noted?</p> <p><b>Iterative Process: Training and Outreach</b>  EVALUATE – Are pollutants observed from concerns and inspections the same as those targeted by outreach and training?  EFFECTIVE – Y or N? If no, change pollution prevention outreach methods, targeted pollutants or audiences based on types of concerns received and inspection observations/results. Re-evaluate.  If yes, keep BMPs and strategies that provide measurable achievements.  CHANGES – Are implementation procedures or BMPs updates required?</p> <p>Were changes made and noted?</p>				
<b>6. List of BMPs Evaluated and How BMPs were Determined Effective</b>				
Date of Review(s): Reviewer:  BMPs EVALUATED: The annual review may include the following per 4.5.M: <ul style="list-style-type: none"> <li>- Reviewing the number and types of developments;</li> <li>- How many BMPs were installed/inspected;</li> <li>- The amount of watershed area or water quality volume being treated;</li> <li>- The types of violations found and how frequently; and</li> <li>- How education could improve the effectiveness of the program.</li> </ul>				

## Minimum Control Measure #6: Pollution Prevention/Good Housekeeping for Municipal Operations

### 1. STATUS OF COMPLIANCE WITH PERMIT CONDITIONS

(Summary to be provided in annual reports.)

#### Status of Measurable Goals

Task / BMP	Measurable Goal(s)	Tracking & Adaptive Management	Implementation Schedule	Individual(s) Responsible
O&M Employee Training (i.e. staff who work with material handling, at MS4 owned or operated vehicle/equipment maintenance areas, storage yards, and material storage facilities).	Promote, or conduct and maintain and utilize an employee training program for MS4 municipal operations staff. Trainings are given at minimum annually, during new staff orientations or as needed in accordance with the O&M Program Manual.	Track and review the applicable staff, training topics, number of trainings promoted/conducted and number of participants.	Ongoing	Stormwater Manager & O&M Program Responsible Party
Operations & Maintenance (O&M) Program	Update and maintain the O&M Program and Manual. Include pollution prevention controls, inspection and staff training schedules, and tracking requirements implemented annually. The O&M Manual shall be present onsite/electronically with staff at facilities.  Develop maps and descriptions of structural controls/BMPs to reduce or prevent the discharge of floatables and pollutants from entering waters of the state or other MS4s where needed.	Track and review the applicable municipal operations, locations and BMPs that may have water quality impacts. Update program to reflect new facilities, operations, or BMPs as needed.	July 2022  November 2022	Stormwater Manager & O&M Program Responsible Party
Municipal Facility Inspections & Maintenance	Perform inspection and maintenance activities at municipal facilities in accordance with the O&M Manual.	Track inspections, maintenance activities, and updates annually; keep on file through the permit cycle.	Ongoing	Stormwater Manager & O&M Program Responsible Party
Flood Management Projects	Assess all new flood/stormwater projects for water quality impacts	Design criteria continue to be in place to assess all projects and recommend water quality protection practices/BMPs through Engineering plan review	Ongoing	Senior Civil Engineers



Road Salt/Brine/Deicer Alternatives	Annually track usage of rock salt, brine or other street deicers or salt alternatives for street deicing pre-treatment with the goal of reducing use of traditional road salt.	Evaluate and track use of traditional road salt and alternatives	Ongoing	Superintendent Street, Signals & Fleet
Street Sweeping	Sweep main streets a minimum of twice yearly and a goal of twice monthly and subdivision streets quarterly, weather permitting	Track frequency of street sweeping operations, and estimated amount of debris removed	Ongoing	Superintendent Street, Signals & Fleet

## 2. Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the Maximum Extent Practicable (MEP) to the MS4

**List of any additional programmatic BMPs added to the SWMP** (i.e. programmatic BMPs include new training program, adopting a standard operating procedure for equipment cleaning, etc.)

## 3. Notice that the City is Relying on Another Government Entity to Satisfy Permit Obligations (if applicable)

Name of Government Entity:	N/A	Contact Info:		
Primary Contact:		Specific BMPs or MCMs Entity Implements:		

## 4. Summary of Stormwater Activities & Known Construction Activities Scheduled to Begin During the Next Reporting Period

## 5. Changes to the SWMP, BMPs or Measurable Goals and the Iterative Processes that Occurred

The O&M Program is reviewed with regards to the BMPs tracked above to evaluate their effectiveness and implementation.

EVALUATE – Were pollutants observed from concerns and inspection/maintenance logs the same as those targeted by procedures and training BMPs?

EFFECTIVE - Y or N? If no, change SOPs, schedules and/or training strategies based on types of concerns received and inspection observations/results to prevent or minimize water quality impacts.

Re-evaluate. If yes, keep target pollutants, procedures and trainings.

CHANGES – Are implementation procedures or BMPs updates required?

Were changes made and noted?

## 6. List of BMPs Evaluated and How BMPs were Determined Effective

Date of Review(s):

Reviewer:

BMPs EVALUATED:

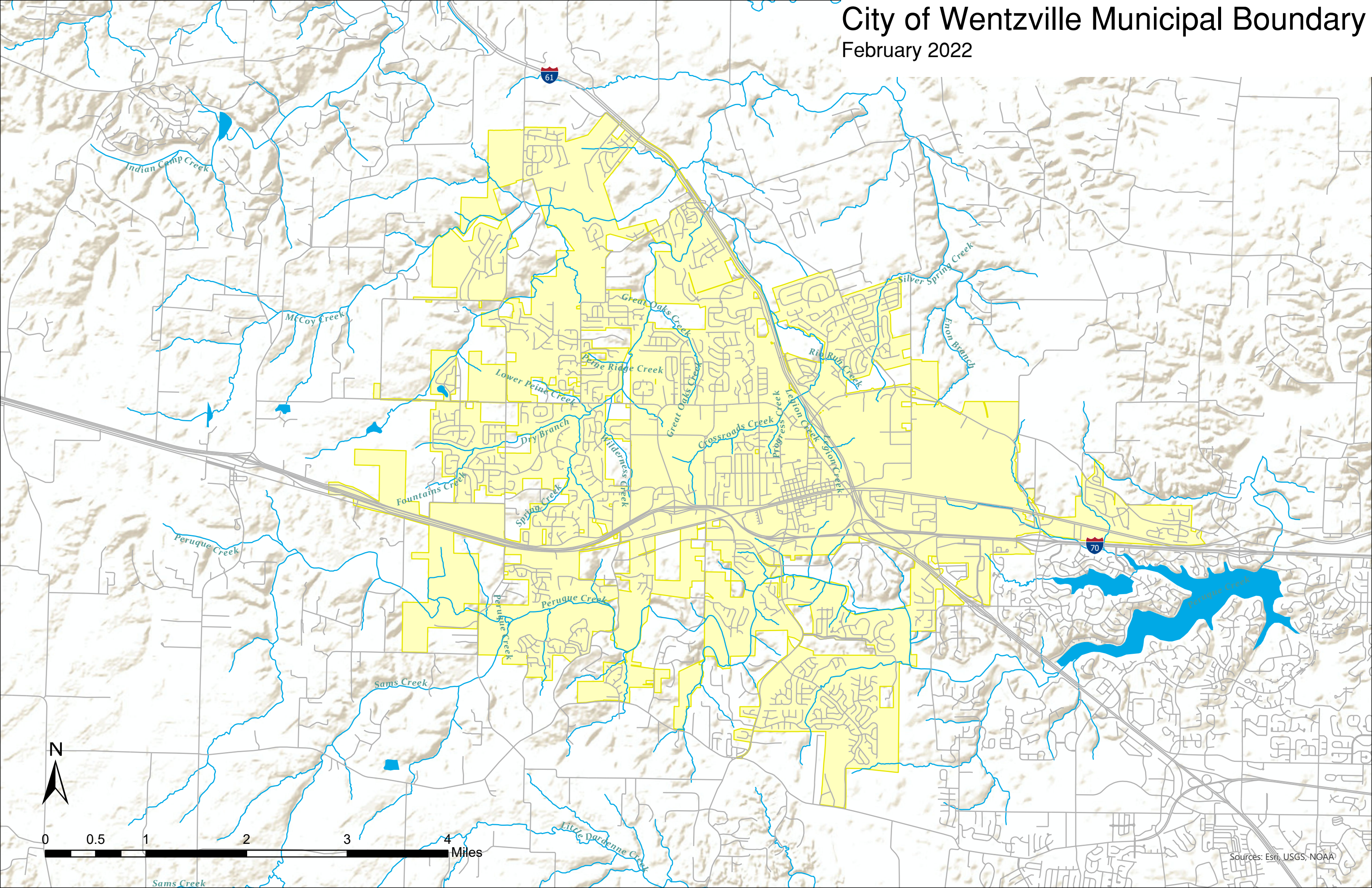
Appendix B

# Municipal Boundary Map



# City of Wentzville Municipal Boundary

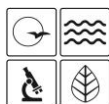
February 2022





Appendix C

# 2020 EPA Approved 303(d) List



**Missouri Department of Natural Resources**  
**2020 Section 303(d) Listed Waters**

Approved by EPA on 09/13/2021

Row #	Year	WBID	Waterbody	Class	Entire WB Imprd	WB Size	Units	IU	Pollutant	Source	County Up/Down	HUC 8	Comment	TMDL Priority	TMDL Schedule Year
1	2012	<a href="#">2188.00</a>	Antire Cr.	P	Y	1.90	Miles	WBC B	Escherichia coli (W)	Nonpoint Source	St. Louis	07140102		H	2025
2	2018	<a href="#">2668.00</a>	Ashley Cr.	P	Y	2.50	Miles	WBC B	Escherichia coli (W)	Rural NPS	Dent	11010008		H	2025
3	2018	<a href="#">7637.00</a>	August A Busch Lake Number 36	UL	Y	16.00	Acres	GEN	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	St. Charles	07110009		L	> 10 years
4	2010	<a href="#">7627.00</a>	August A Busch Lake Number 37	L3	Y	30.00	Acres	GEN	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	St. Charles	07110009		L	> 10 years
5	2020	<a href="#">7239.00</a>	<b>Austin Community Lake</b>	<b>L3</b>	<b>Y</b>	<b>21.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Texas</b>	<b>10290201</b>	<b>1</b>	L	> 10 years
6	2016	<a href="#">4083.00</a>	Barker Creek tributary	C	Y	1.20	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Henry	10290108		L	> 10 years
7	2018	<a href="#">2693.00</a>	Barn Hollow	C	Y	8.20	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Howell/Texas	11010008		L	> 10 years
8	2012	<a href="#">0752.00</a>	Bass Cr.	C	Y	4.40	Miles	WBC A	Escherichia coli (W)	Rural NPS	Boone	10300102		H	2023
9	2012	<a href="#">3240.00</a>	Baynham Br.	P	Y	4.00	Miles	WBC B	Escherichia coli (W)	Rural NPS	Newton	11070207	5	L	> 10 years
10	2014	<a href="#">3224.00</a>	Beef Br.	P	Y	2.50	Miles	AQL	Cadmium (S)	Mill Tailings	Newton	11070207		M	2026 - 2030
11	2014	<a href="#">3224.00</a>	Beef Br.	P	Y	2.50	Miles	AQL	Cadmium (W)	Mill Tailings	Newton	11070207		M	2026 - 2030
12	2014	<a href="#">3224.00</a>	Beef Br.	P	Y	2.50	Miles	AQL	Lead (S)	Mill Tailings	Newton	11070207		M	2026 - 2030
13	2014	<a href="#">3224.00</a>	Beef Br.	P	Y	2.50	Miles	AQL	Zinc (S)	Mill Tailings	Newton	11070207		M	2026 - 2030
14	2014	<a href="#">3224.00</a>	Beef Br.	P	Y	2.50	Miles	AQL	Zinc (W)	Mill Tailings	Newton	11070207		M	2026 - 2030
15	2014	<a href="#">7309.00</a>	Bee Tree Lake	L3	Y	10.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	St. Louis	07140102		L	> 10 years
16	2006	<a href="#">7365.00</a>	Belcher Branch Lake	L3	Y	42.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Buchanan	10240012		L	> 10 years
17	2020	<a href="#">2179.00</a>	<b>Belew Cr.</b>	<b>P</b>	<b>Y</b>	<b>7.00</b>	<b>Miles</b>	<b>AQL</b>	<b>Oxygen, Dissolved (W)</b>	<b>Municipal Point Source Discharges, Source Unknown</b>	<b>Jefferson</b>	<b>07140104</b>		L	> 10 years
18	2018	<a href="#">7186.00</a>	Ben Branch Lake	L3	Y	37.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Osage	10300102		L	> 10 years
19	2014	<a href="#">3980.00</a>	Bens Branch	C	Y	5.80	Miles	AQL	Cadmium (S)	Oronogo/Duenweg Mining Belt	Jasper	11070207		H	2022
20	2018	<a href="#">3980.00</a>	Bens Branch	C	Y	5.80	Miles	AQL	Cadmium (W)	Mill Tailings	Jasper	11070207		H	2022
21	2014	<a href="#">3980.00</a>	Bens Branch	C	Y	5.80	Miles	AQL	Lead (S)	Oronogo/Duenweg Mining Belt	Jasper	11070207		H	2022
22	2014	<a href="#">3980.00</a>	Bens Branch	C	Y	5.80	Miles	AQL	Zinc (S)	Oronogo/Duenweg Mining Belt	Jasper	11070207		H	2022
23	2016	<a href="#">3980.00</a>	Bens Branch	C	Y	5.80	Miles	AQL	Zinc (W)	Oronogo/Duenweg Mining Belt	Jasper	11070207		H	2022
24	2010	<a href="#">2916.00</a>	Big Cr.	P	N (1.8)	34.10	Miles	AQL	Cadmium (S)	Glover smelter	Iron	08020202		M	2026 - 2030
25	2010	<a href="#">1578.00</a>	Big Piney R.	P	N (4)	7.80	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Texas	10290202	2	M	2026 - 2030
26	2006	<a href="#">2080.00</a>	Big R.	P	N (52.8)	81.30	Miles	AQL	Cadmium (S)	Old Lead Belt tailings	St. Francois/Jefferson	07140104		H	2024
27	2012	<a href="#">2080.00</a>	Big R.	P	Y	81.30	Miles	AQL	Zinc (S)	Old Lead Belt tailings	St. Francois/Jefferson	07140104		H	2024
28	2020	<a href="#">7185.00</a>	<b>Binder Lake</b>	<b>L3</b>	<b>Y</b>	<b>127.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Cole</b>	<b>10300102</b>	<b>1</b>	L	> 10 years
29	2006	<a href="#">3184.00</a>	Blackberry Cr.	C	N (3.5)	6.50	Miles	AQL	Chloride (W)	Asbury Power Plant	Jasper	11070207		M	2026 - 2030
30	2008	<a href="#">3184.00</a>	Blackberry Cr.	C	N (3.5)	6.50	Miles	AQL	Sulfate + Chloride (W)	Asbury Power Plant	Jasper	11070207		M	2026 - 2030
31	2020	<a href="#">0112.00</a>	<b>Black Cr.</b>	<b>C</b>	<b>Y</b>	<b>21.80</b>	<b>Miles</b>	<b>WBC B</b>	<b>Escherichia coli (W)</b>	<b>Nonpoint Source</b>	<b>Shelby</b>	<b>07110005</b>		L	> 10 years
32	2006	<a href="#">3825.00</a>	Black Creek	P	Y	5.60	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		H	2025
33	2002	<a href="#">2769.00</a>	Black R.	P	Y	47.10	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Butler	11010007	2	L	> 10 years
34	2002	<a href="#">2784.00</a>	Black R.	P	Y	39.00	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Wayne/Butler	11010007	2	L	> 10 years
35	2020	<a href="#">7189.00</a>	<b>Blind Pony Lake</b>	<b>L3</b>	<b>Y</b>	<b>96.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Saline</b>	<b>10300104</b>	<b>1</b>	L	> 10 years
36	2006	<a href="#">0417.00</a>	Blue R.	P	Y	4.40	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2023
37	2006	<a href="#">0418.00</a>	Blue R.	P	Y	9.40	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2023
38	2006	<a href="#">0419.00</a>	Blue R.	P	Y	7.70	Miles	WBC A	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2023

Row #	Year	WBID	Waterbody	Class	Entire WB Imprd	WB Size	Units	IU	Pollutant	Source	County Up/Down	HUC 8	Comment	TMDL Priority	TMDL Schedule Year
39	2016	<a href="#">0417.00</a>	Blue R.	P	Y	4.40	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2023
40	2016	<a href="#">0418.00</a>	Blue R.	P	Y	9.40	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2023
41	2012	<a href="#">1701.00</a>	Bonhomme Cr.	C	Y	2.50	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	10300200		M	2026 - 2030
42	2006	<a href="#">0750.00</a>	Bonne Femme Cr.	P	Y	7.80	Miles	WBC A	Escherichia coli (W)	Rural NPS	Boone	10300102		H	2023
43	2012	<a href="#">0753.00</a>	Bonne Femme Cr.	C	Y	7.00	Miles	WBC B	Escherichia coli (W)	Rural NPS	Boone	10300102		H	2023
44	2002	<a href="#">2034.00</a>	Bourbeuse R.	P	Y	136.70	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Phelps/Franklin	07140103	2	L	> 10 years
45	2014	<a href="#">7003.00</a>	Bowling Green Lake - Old	L1	Y	7.00	Acres	AQL	Chlorophyll-a (W)	Rural NPS	Pike	07110004	1 2	L	> 10 years
46	2012	<a href="#">7003.00</a>	Bowling Green Lake - Old	L1	Y	7.00	Acres	AQL	Nitrogen, Total (W)	Rural NPS	Pike	07110004	1 2	L	> 10 years
47	2012	<a href="#">7003.00</a>	Bowling Green Lake - Old	L1	Y	7.00	Acres	AQL	Phosphorus, Total (W)	Rural NPS	Pike	07110004	1 2	L	> 10 years
48	2012	<a href="#">1796.00</a>	Brazeau Cr.	P	Y	10.80	Miles	WBC B	Escherichia coli (W)	Rural NPS	Perry	07140105		M	2026 - 2030
49	2002	<a href="#">1371.00</a>	Brush Cr.	P	Y	4.70	Miles	AQL	Oxygen, Dissolved (W)	Humansville WWTP	Polk/St. Clair	10290106		H	2020
50	2016	<a href="#">3986.00</a>	Brush Creek	C	Y	5.40	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2023
51	2016	<a href="#">3986.00</a>	Brush Creek	C	Y	5.40	Miles	AQL	Oxygen, Dissolved (W)	Nonpoint Source	Jackson	10300101		L	> 10 years
52	2020	<a href="#">7117.00</a>	<b>Buffalo Bill Lake</b>	<b>L3</b>	<b>Y</b>	<b>45.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>DeKalb</b>	<b>10280101</b>	<b>1 6</b>	L	> 10 years
53	2016	<a href="#">7117.00</a>	Buffalo Bill Lake	L3	Y	45.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	DeKalb	10280101		L	> 10 years
54	2012	<a href="#">3273.00</a>	Buffalo Cr.	P	Y	8.00	Miles	AQL	Fishes Bioassessments/ Unknown (W)	Source Unknown	Newton/McDonald	11070208	3	M	2026 - 2030
55	2008	<a href="#">3118.00</a>	Buffalo Ditch	P	Y	17.30	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Dunklin	08020204		M	2026 - 2030
56	2006	<a href="#">1865.00</a>	Burgher Br.	C	Y	1.50	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Phelps	07140102		M	2026 - 2030
57	2018	<a href="#">3414.00</a>	Burr Oak Cr.	C	Y	6.80	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2024
58	2018	<a href="#">3414.00</a>	Burr Oak Cr.	C	Y	6.80	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2024
59	2020	<a href="#">3414.00</a>	<b>Burr Oak Cr.</b>	<b>C</b>	<b>Y</b>	<b>6.80</b>	<b>Miles</b>	<b>AQL</b>	<b>Oxygen, Dissolved (W)</b>	<b>Source Unknown</b>	<b>Jackson</b>	<b>10300101</b>		L	> 10 years
60	2020	<a href="#">7056.00</a>	<b>Busch W.A.- Kraut Run Lake</b>	<b>L3</b>	<b>Y</b>	<b>164.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>St. Charles</b>	<b>07110009</b>	<b>1</b>	L	> 10 years
61	2006	<a href="#">7057.00</a>	Busch W.A. No. 35 Lake	L3	Y	51.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	St. Charles	07110009		L	> 10 years
62	2020	<a href="#">7229.00</a>	<b>Butler Lake</b>	<b>L1</b>	<b>Y</b>	<b>71.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Bates</b>	<b>10290102</b>	<b>1 2</b>	L	> 10 years
63	2020	<a href="#">7120.00</a>	<b>Cameron Lake #1</b>	<b>L1</b>	<b>Y</b>	<b>25.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>DeKalb</b>	<b>10280101</b>	<b>1 2 6</b>	L	> 10 years
64	2020	<a href="#">7384.00</a>	<b>Cameron Lake #4 (Grindstone Reservoir)</b>	<b>L1</b>	<b>Y</b>	<b>173.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>DeKalb</b>	<b>10280101</b>	<b>1 2</b>	L	> 10 years
65	2006	<a href="#">3234.00</a>	Capps Cr.	P	Y	5.00	Miles	WBC A	Escherichia coli (W)	Rural NPS	Barry/Newton	11070207	5	L	> 10 years
66	2016	<a href="#">3241.00</a>	Carver Br.	P	Y	3.00	Miles	WBC A	Escherichia coli (W)	Nonpoint Source	Newton	11070207	5	L	> 10 years
67	2020	<a href="#">7374.00</a>	<b>Catawba Lake</b>	<b>L3</b>	<b>Y</b>	<b>42.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Jackson</b>	<b>10290108</b>	<b>1</b>	L	> 10 years
68	2008	<a href="#">1344.00</a>	Cedar Cr.	P	N (10.9)	31.00	Miles	AQL	Aquatic Macroinvertebrate Bioassessments/ Unknown (W)	Source Unknown	Cedar	10290106	3	M	2026 - 2030
69	2008	<a href="#">0737.00</a>	Cedar Cr.	C	N (7.9)	37.40	Miles	AQL	Aquatic Macroinvertebrate Bioassessments/ Unknown (W)	Source Unknown	Boone	10300102	3	M	2026 - 2030
70	2010	<a href="#">1357.00</a>	Cedar Cr.	C	Y	16.20	Miles	AQL	Aquatic Macroinvertebrate Bioassessments/ Unknown (W)	Source Unknown	Dade/Cedar	10290106	3	L	> 10 years
71	2016	<a href="#">1344.00</a>	Cedar Cr.	P	Y	31.00	Miles	WBC A	Escherichia coli (W)	Rural NPS	Cedar	10290106		H	2020
72	2008	<a href="#">1357.00</a>	Cedar Cr.	C	Y	16.20	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Dade/Cedar	10290106		M	2026 - 2030
73	2010	<a href="#">1344.00</a>	Cedar Cr.	P	N (10.9)	31.00	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Cedar	10290106		M	2026 - 2030
74	2020	<a href="#">7199.00</a>	<b>Cedar Lake</b>	<b>L3</b>	<b>Y</b>	<b>21.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Boone</b>	<b>10300102</b>	<b>1 6</b>	L	> 10 years
75	2006	<a href="#">3203.00</a>	Center Cr.	P	N (19)	26.80	Miles	AQL	Cadmium (S)	Tri-State Mining District	Jasper	11070207		H	2022
76	2008	<a href="#">3210.00</a>	Center Cr.	P	Y	21.00	Miles	WBC A	Escherichia coli (W)	Rural NPS	Newton/Jasper	11070207	5	L	> 10 years
77	2010	<a href="#">3214.00</a>	Center Cr.	P	Y	4.90	Miles	WBC A	Escherichia coli (W)	Rural NPS	Lawrence/Newton	11070207	5	L	> 10 years
78	2006	<a href="#">3203.00</a>	Center Cr.	P	N (19)	26.80	Miles	AQL	Lead (S)	Tri-State Mining District	Jasper	11070207		H	2022
79	2016	<a href="#">5003.00</a>	Center Creek tributary	C	Y	2.70	Miles	AQL	Cadmium (W)	Oronogo/Duenweg Mining Belt	Jasper	11070207		H	2022
80	2020	<a href="#">5003.00</a>	<b>Center Creek tributary</b>	<b>C</b>	<b>Y</b>	<b>2.70</b>	<b>Miles</b>	<b>AQL</b>	<b>Lead (W)</b>	<b>Mill Tailings</b>	<b>Jasper</b>	<b>11070207</b>		H	2022



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81	2016	<a href="#">5003.00</a>	Center Creek tributary	C	Y	2.70	Miles	AQL	Zinc (W)	Oronogo/Duenweg Mining Belt	Jasper	11070207		H	2022
82	2014	<a href="#">7634.00</a>	Chaumiere Lake	UL	Y	3.40	Acres	GEN	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Clay	10300101		M	2026 - 2030
83	2012	<a href="#">1781.00</a>	Cinque Hommes Cr.	P	Y	17.10	Miles	WBC B	Escherichia coli (W)	Rural NPS	Perry	07140105		M	2026 - 2030
84	2016	<a href="#">1781.00</a>	Cinque Hommes Cr.	P	Y	17.10	Miles	SCR	Escherichia coli (W)	Rural NPS	Perry	07140105		M	2026 - 2030
<b>85</b>	<b>2020</b>	<b><a href="#">7047.00</a></b>	<b>City Lake #1 - Perry</b>	<b>L1</b>	<b>Y</b>	<b>16.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Ralls</b>	<b>07110007</b>	<b>1 2 6</b>	L	> 10 years
86	2018	<a href="#">1000.00</a>	Clark Fk.	C	Y	6.00	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Cole	10300102		L	> 10 years
87	2006	<a href="#">3238.00</a>	Clear Cr.	P	Y	11.10	Miles	WBC B	Escherichia coli (W)	Rural NPS	Lawrence/Newton	11070207	5	L	> 10 years
88	2002	<a href="#">3239.00</a>	Clear Cr.	C	Y	3.50	Miles	AQL	Nutrient/Eutrophication Biol. Indicators (W)	Monett WWTP	Barry/Lawrence	11070207	1	H	2020
89	2002	<a href="#">3239.00</a>	Clear Cr.	C	Y	3.50	Miles	AQL	Oxygen, Dissolved (W)	Monett WWTP	Barry/Lawrence	11070207		H	2020
90	2006	<a href="#">1333.00</a>	Clear Cr.	P	Y	28.20	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Vernon/St. Clair	10290105		M	2026 - 2030
91	2006	<a href="#">0935.00</a>	Clear Fk.	P	N (3.1)	25.80	Miles	AQL	Oxygen, Dissolved (W)	Knob Noster WWTP	Johnson	10300104		H	2025
92	2014	<a href="#">7326.00</a>	Clearwater Lake	L2	Y	1635.00	Acres	AQL	Chlorophyll-a (W)	Rural NPS	Reynolds/Wayne	11010007	1	L	> 10 years
93	2002	<a href="#">7326.00</a>	Clearwater Lake	L2	Y	1635.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Reynolds/Wayne	11010007		L	> 10 years
94	2016	<a href="#">7326.00</a>	Clearwater Lake	L2	Y	1635.00	Acres	AQL	Phosphorus, Total (W)	Nonpoint Source	Reynolds/Wayne	11010007	1	L	> 10 years
95	2006	<a href="#">1706.00</a>	Coldwater Cr.	C	Y	6.90	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis	10300200		H	2025
<b>96</b>	<b>2020</b>	<b><a href="#">7378.00</a></b>	<b>Coot Lake</b>	<b>L3</b>	<b>Y</b>	<b>20.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Jackson</b>	<b>10290108</b>	<b>1</b>	L	> 10 years
97	2016	<a href="#">7378.00</a>	Coot Lake	L3	Y	20.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Jackson	10290108		L	> 10 years
98	2016	<a href="#">7379.00</a>	Cottontail Lake	L3	Y	22.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Jackson	10290108		L	> 10 years
<b>99</b>	<b>2020</b>	<b><a href="#">3962.00</a></b>	<b>Crackerneck Creek</b>	<b>C</b>	<b>Y</b>	<b>6.00</b>	<b>Miles</b>	<b>WBC B</b>	<b>Escherichia coli (W)</b>	<b>Urban Runoff/Storm Sewers</b>	<b>Jackson</b>	<b>10300101</b>		L	> 10 years
100	2012	<a href="#">2382.00</a>	Crane Cr.	P	Y	13.20	Miles	AQL	Aquatic Macroinvertebrate Bioassessments/ Unknown (W)	Source Unknown	Stone	11010002	3	M	2026 - 2030
101	2016	<a href="#">7334.00</a>	Crane Lake	L3	Y	109.00	Acres	AQL	Chlorophyll-a (W)	Source Unknown	Iron	08020202	1	L	> 10 years
102	2016	<a href="#">7334.00</a>	Crane Lake	L3	Y	109.00	Acres	AQL	Phosphorus, Total (W)	Source Unknown	Iron	08020202	1	L	> 10 years
103	2012	<a href="#">2816.00</a>	Craven Ditch	C	Y	11.60	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Butler	11010007		L	> 10 years
104	2006	<a href="#">1703.00</a>	Creve Coeur Cr.	C	Y	3.80	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis	10300200		H	2025
105	2008	<a href="#">3961.00</a>	Crooked Creek	C	Y	6.50	Miles	AQL	Cadmium (W)	Buick Lead Smelter	Iron/Crawford	07140102		M	2026 - 2030
106	2010	<a href="#">3961.00</a>	Crooked Creek	C	Y	6.50	Miles	AQL	Copper (W)	Buick Lead Smelter	Iron/Crawford	07140102		M	2026 - 2030
107	2016	<a href="#">7135.00</a>	Crowder St. Park Lake	L3	Y	18.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Grundy	10280102		L	> 10 years
<b>108</b>	<b>2020</b>	<b><a href="#">0152.00</a></b>	<b>Cuivre R.</b>	<b>P</b>	<b>Y</b>	<b>30.00</b>	<b>Miles</b>	<b>WBC A</b>	<b>Escherichia coli (W)</b>	<b>Nonpoint Source</b>	<b>Lincoln/St. Charles</b>	<b>07110008</b>		L	> 10 years
109	2006	<a href="#">2636.00</a>	Current R.	P	Y	124.00	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Shannon/Ripley	11010008		L	> 10 years
110	2018	<a href="#">2662.00</a>	Current R.	P	Y	18.80	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Dent/Shannon	11010008		L	> 10 years
<b>111</b>	<b>2020</b>	<b><a href="#">7647.00</a></b>	<b>Dairy Farm Lake Number 1</b>	<b>L3</b>	<b>Y</b>	<b>14.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Boone</b>	<b>10300102</b>	<b>1 6</b>	L	> 10 years
112	2018	<a href="#">0221.00</a>	Dardenne Cr.	P	Y	16.50	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Charles	07110009		M	2026 - 2030
<b>113</b>	<b>2020</b>	<b><a href="#">0222.00</a></b>	<b>Dardenne Cr.</b>	<b>C</b>	<b>Y</b>	<b>8.50</b>	<b>Miles</b>	<b>WBC B</b>	<b>Escherichia coli (W)</b>	<b>Urban Runoff and Nonpoint Source</b>	<b>St. Charles</b>	<b>07110009</b>		L	> 10 years
114	2006	<a href="#">0219.00</a>	Dardenne Cr.	P1	Y	7.00	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	St. Charles	07110009		M	2026 - 2030
115	2006	<a href="#">3826.00</a>	Deer Creek	P	Y	1.60	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis/St. Louis City	07140101		H	2025
<b>116</b>	<b>2020</b>	<b><a href="#">7015.00</a></b>	<b>Deer Ridge Community Lake</b>	<b>L3</b>	<b>Y</b>	<b>45.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Lewis</b>	<b>07110002</b>	<b>1 6</b>	L	> 10 years
117	2002	<a href="#">7015.00</a>	Deer Ridge Community Lake	L3	Y	45.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Lewis	07110002		L	> 10 years
<b>118</b>	<b>2020</b>	<b><a href="#">7331.00</a></b>	<b>DiSalvo Lake</b>	<b>L3</b>	<b>Y</b>	<b>210.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>St. Francois</b>	<b>08020202</b>	<b>1</b>	L	> 10 years
119	2006	<a href="#">3109.00</a>	Ditch #36	P	Y	7.80	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Dunklin	08020204		M	2026 - 2030
120	2006	<a href="#">3810.00</a>	Douger Br.	C	Y	2.80	Miles	AQL	Lead (S)	Aurora Lead Mining District	Lawrence	11070207		M	2026 - 2030
121	2006	<a href="#">3810.00</a>	Douger Br.	C	Y	2.80	Miles	AQL	Zinc (S)	Aurora Lead Mining District	Lawrence	11070207		M	2026 - 2030

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122	2020	<a href="#">7228.00</a>	Drexel Lake	L1	Y	28.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Bates	10290102	1 2	L	> 10 years
123	2008	<a href="#">3189.00</a>	Dry Fk.	C	Y	10.20	Miles	WBC A	Escherichia coli (W)	Rural NPS	Jasper	11070207	5	L	> 10 years
124	2016	<a href="#">1792.00</a>	Dry Fk.	C	Y	3.20	Miles	WBC B	Escherichia coli (W)	Source Unknown	Perry	07140105		M	2026 - 2030
125	2016	<a href="#">3163.00</a>	Dry Hollow	C	Y	0.50	Miles	SCR	Escherichia coli (W)	Source Unknown	Lawrence	11070207		M	2026 - 2030
126	2016	<a href="#">3570.00</a>	Dutro Carter Cr.	C	Y	0.50	Miles	SCR	Escherichia coli (W)	Source Unknown	Phelps	07140102		M	2026 - 2030
127	2016	<a href="#">3570.00</a>	Dutro Carter Cr.	C	Y	0.50	Miles	WBC B	Escherichia coli (W)	Source Unknown	Phelps	07140102		M	2026 - 2030
128	2006	<a href="#">3569.00</a>	Dutro Carter Cr.	P	N (0.5)	1.50	Miles	AQL	Oxygen, Dissolved (W)	Rolla SE WWTP	Phelps	07140102		M	2026 - 2030
129	2016	<a href="#">3199.00</a>	Duval Cr.	C	Y	7.00	Miles	WBC B	Escherichia coli (W)	Nonpoint Source	Jasper	11070207	5	L	> 10 years
130	2006	<a href="#">2166.00</a>	Eaton Br.	C	Y	1.20	Miles	AQL	Cadmium (S)	Leadwood tailings pond	St. Francois	07140104		H	2024
131	2006	<a href="#">2166.00</a>	Eaton Br.	C	Y	1.20	Miles	AQL	Cadmium (W)	Leadwood tailings pond	St. Francois	07140104		H	2024
132	2006	<a href="#">2166.00</a>	Eaton Br.	C	Y	1.20	Miles	AQL	Lead (S)	Leadwood tailings pond	St. Francois	07140104		H	2024
133	2018	<a href="#">2166.00</a>	Eaton Br.	C	Y	1.20	Miles	AQL	Lead (W)	Leadwood tailings pond	St. Francois	07140104		H	2024
134	2006	<a href="#">2166.00</a>	Eaton Br.	C	Y	1.20	Miles	AQL	Zinc (S)	Leadwood tailings pond	St. Francois	07140104		H	2024
135	2006	<a href="#">2166.00</a>	Eaton Br.	C	Y	1.20	Miles	AQL	Zinc (W)	Leadwood tailings pond	St. Francois	07140104		H	2024
136	2020	<a href="#">7026.00</a>	Edina Reservoir	L1	Y	51.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Knox	07110003	1 2	L	> 10 years
137	2020	<a href="#">7192.00</a>	Edwin A Pape Lake	L1	Y	272.50	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Lafayette	10300104	1 2	L	> 10 years
138	2010	<a href="#">0372.00</a>	E. Fk. Crooked R.	P	Y	19.90	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Ray	10300101		M	2026 - 2030
139	2006	<a href="#">0457.00</a>	E. Fk. Grand R.	P	Y	28.70	Miles	WBC A	Escherichia coli (W)	Rural NPS	Worth/Gentry	10280101	2	H	2020
140	2020	<a href="#">0428.00</a>	E. Fk. L. Blue R.	C	N (2.6)	3.70	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Jackson	10300101		L	> 10 years
141	2020	<a href="#">0610.00</a>	E. Fk. Locust Cr.	C	Y	15.70	Miles	AQL	Chloride (W)	Industrial Point Source Discharge	Sullivan	10280103		L	> 10 years
142	2008	<a href="#">0608.00</a>	E. Fk. Locust Cr.	P	Y	16.70	Miles	WBC B	Escherichia coli (W)	Milan Lagoon and Nonpoint Source	Sullivan	10280103		H	2025
143	2008	<a href="#">0610.00</a>	E. Fk. Locust Cr.	C	Y	15.70	Miles	WBC A	Escherichia coli (W)	Rural NPS	Sullivan	10280103		H	2025
144	2018	<a href="#">0608.00</a>	E. Fk. Locust Cr.	P	Y	16.70	Miles	SCR	Escherichia coli (W)	Milan Lagoon and Nonpoint Source	Sullivan	10280103		H	2025
145	2018	<a href="#">1282.00</a>	E. Fk. Tebo Cr.	C	Y	14.50	Miles	AQL	Ammonia, Total (W)	Municipal Point Source Discharges	Henry	10290108		L	> 10 years
146	2006	<a href="#">1282.00</a>	E. Fk. Tebo Cr.	C	N (10.4)	14.50	Miles	AQL	Oxygen, Dissolved (W)	Windsor SW WWTP	Henry	10290108		M	2026 - 2030
147	2002	<a href="#">2593.00</a>	Eleven Point R.	P	Y	22.70	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Oregon	11010011		L	> 10 years
148	2006	<a href="#">2597.00</a>	Eleven Point R.	P	Y	11.40	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Oregon	11010011		L	> 10 years
149	2008	<a href="#">2601.00</a>	Eleven Point R.	P	Y	22.30	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Oregon	11010011		L	> 10 years
150	2002	<a href="#">0189.00</a>	Elkhorn Cr.	C	N (17.6)	21.40	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Montgomery	07110008		M	2026 - 2030
151	2020	<a href="#">7011.00</a>	Ella Ewing Community Lake	L3	Y	15.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Scotland	07110002	1	L	> 10 years
152	2006	<a href="#">1283.00</a>	Elm Br.	C	Y	3.00	Miles	AQL	Oxygen, Dissolved (W)	Windsor SE WWTP	Henry	10290108		M	2026 - 2030
153	2020	<a href="#">7146.00</a>	Elmwood City Lake	L1	Y	197.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Sullivan	10280103	1 2 6	L	> 10 years
154	2018	<a href="#">4110.00</a>	Engelholm Creek	C	Y	3.00	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		L	> 10 years
155	2018	<a href="#">4110.00</a>	Engelholm Creek	C	Y	3.00	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		L	> 10 years
156	2012	<a href="#">1704.00</a>	Fee Fee Cr. (new)	P	Y	1.50	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis	10300200		M	2026 - 2030
157	2012	<a href="#">1704.00</a>	Fee Fee Cr. (new)	P	Y	1.50	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	10300200		H	2020
158	2012	<a href="#">7237.00</a>	Fellows Lake	L1	Y	800.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Greene	10290106	2	L	> 10 years
159	2016	<a href="#">3595.00</a>	Fenton Cr.	P	Y	0.50	Miles	AQL	Chloride (W)	Source Unknown	St. Louis	07140102		M	2026 - 2030
160	2012	<a href="#">3595.00</a>	Fenton Cr.	P	Y	0.50	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140102		M	2026 - 2030
161	2012	<a href="#">2186.00</a>	Fishpot Cr.	P	Y	3.50	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis	07140102		M	2026 - 2030
162	2016	<a href="#">3220.00</a>	Fivemile Cr.	P	N (4.9)	5.00	Miles	WBC B	Escherichia coli (W)	Rural NPS	Newton	11070207	5	L	> 10 years
163	2016	<a href="#">0864.00</a>	Flat Cr.	P	Y	23.70	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Pettis/Morgan	10300103		L	> 10 years
164	2006	<a href="#">2168.00</a>	Flat River Cr.	C	N (4.7)	10.00	Miles	AQL	Cadmium (W)	Old Lead Belt tailings	St. Francois	07140104		H	2024
165	2012	<a href="#">3938.00</a>	Flat River tributary	US	Y	0.30	Miles	GEN	Zinc (W)	Elvins Chat Pile	St. Francois	07140104		H	2024

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166	2020	<a href="#">3587.00</a>	Fleck Cr.	C	Y	4.30	Miles	AQL	Sulfate + Chloride (W)	Coal Mining	Barton	10290104		L	> 10 years
167	2010	<a href="#">7151.00</a>	Forest Lake	L1	Y	580.00	Acres	AQL	Chlorophyll-a (W)	Rural NPS	Adair	10280202	1 2	L	> 10 years
168	2016	<a href="#">7151.00</a>	Forest Lake	L1	Y	580.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Adair	10280202	2	L	> 10 years
169	2016	<a href="#">3943.00</a>	Foster Branch tributary	C	N (0.2)	2.00	Miles	AQL	Oxygen, Dissolved (W)	Ashland WWTF	Boone	10300102		M	2026 - 2030
170	2020	<a href="#">7147.00</a>	Fountain Grove Lakes	L3	Y	1366.30	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Linn	10280103	1 6	L	> 10 years
171	2018	<a href="#">7324.00</a>	Fourche Lake	L3	Y	49.00	Acres	AQL	Chlorophyll-a (W)	Source Unknown	Ripley	11010009	1	L	> 10 years
172	2018	<a href="#">7324.00</a>	Fourche Lake	L3	Y	49.00	Acres	AQL	Nitrogen, Total (W)	Source Unknown	Ripley	11010009	1	L	> 10 years
173	2006	<a href="#">0747.00</a>	Fowler Cr.	C	Y	6.00	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Boone	10300102		M	2026 - 2030
174	2010	<a href="#">7382.00</a>	Foxboro Lake	L3	Y	22.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Franklin	07140103		L	> 10 years
175	2008	<a href="#">0038.00</a>	Fox R.	P	Y	42.00	Miles	WBC B	Escherichia coli (W)	Rural NPS	Clark	07110001		M	2026 - 2030
176	2014	<a href="#">7008.00</a>	Fox Valley Lake	L3	Y	89.00	Acres	AQL	Chlorophyll-a (W)	Rural NPS	Clark	07110001	1	L	> 10 years
177	2014	<a href="#">7008.00</a>	Fox Valley Lake	L3	Y	89.00	Acres	AQL	Nitrogen, Total (W)	Rural NPS	Clark	07110001	1	L	> 10 years
178	2010	<a href="#">7008.00</a>	Fox Valley Lake	L3	Y	89.00	Acres	AQL	Phosphorus, Total (W)	Rural NPS	Clark	07110001	1	L	> 10 years
179	2020	<a href="#">7328.00</a>	Fredricktown City Lake	L1	Y	80.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Madison	08020202	1 2	L	> 10 years
180	2002	<a href="#">7280.00</a>	Frisco Lake	L3	Y	5.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Phelps	07140102		L	> 10 years
181	2016	<a href="#">4061.00</a>	Gailey Branch	C	Y	3.20	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Pike	07110007		M	2026 - 2030
182	2012	<a href="#">1004.00</a>	Gans Cr.	C	Y	5.50	Miles	WBC A	Escherichia coli (W)	Rural NPS	Boone	10300102		M	2026 - 2030
183	2020	<a href="#">7426.00</a>	Garden City New Lake	L1	Y	39.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Cass	10290108	1 2	L	> 10 years
184	2002	<a href="#">1455.00</a>	Gasconade R.	P	Y	264.00	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Pulaski	10290203	2	L	> 10 years
185	2020	<a href="#">7383.00</a>	Gopher Lake	L3	Y	38.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Jackson	10290108	1 6	L	> 10 years
186	2006	<a href="#">2184.00</a>	Grand Glaize Cr.	C	Y	4.00	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis	07140102		H	2025
187	2008	<a href="#">2184.00</a>	Grand Glaize Cr.	C	Y	4.00	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140102		M	2026 - 2030
188	2002	<a href="#">2184.00</a>	Grand Glaize Cr.	C	Y	4.00	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	St. Louis	07140102		L	> 10 years
189	2006	<a href="#">0593.00</a>	Grand R.	P	Y	56.00	Miles	WBC A	Escherichia coli (W)	Rural NPS	Livingston/Chariton	10280103	2	M	2026 - 2030
190	2006	<a href="#">1713.00</a>	Gravois Creek	C	Y	10.70	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		H	2025
191	2008	<a href="#">1712.00</a>	Gravois Creek	P	Y	2.30	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis/St. Louis City	07140101		M	2026 - 2030
192	2016	<a href="#">4051.00</a>	Gravois Creek tributary	C	Y	1.90	Miles	WBC B	Escherichia coli (W)	Municipal, Urbanized High Density Area, Urban Runoff/Storm Sewers	St. Louis	07140101		L	> 10 years
193	2020	<a href="#">7161.00</a>	Green City Lake	L1	Y	57.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Sullivan	10280202	1 2	L	> 10 years
194	2020	<a href="#">7754.00</a>	Greenly Farm Lake	L3	Y	17.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Knox	07110004	1 6	L	> 10 years
195	2006	<a href="#">1009.00</a>	Grindstone Cr.	C	Y	2.50	Miles	WBC A	Escherichia coli (W)	Rural NPS	Boone	10300102		M	2026 - 2030
196	2020	<a href="#">7124.00</a>	Hamilton Lake	L1	Y	80.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Caldwell	10280101	1 2 6	L	> 10 years
197	2020	<a href="#">7644.00</a>	Happy Holler Lake	L3	Y	68.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Andrew	10240012	1 6	L	> 10 years
198	2020	<a href="#">7385.00</a>	Harmony Mission Lake	L3	Y	96.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Bates	10290103	1	L	> 10 years
199	2020	<a href="#">7386.00</a>	Harrison County Lake	L1	Y	280.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Harrison	10280101	1 2	L	> 10 years
200	2014	<a href="#">7386.00</a>	Harrison County Lake	L1	Y	280.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Harrison	10280101	2	L	> 10 years
201	2020	<a href="#">7214.00</a>	Harrisonville City Lake	L1	Y	419.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Cass	10290108	1 2	L	> 10 years
202	2020	<a href="#">7207.00</a>	Harry S Truman Reservoir	L2	Y	55600.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Benton	10290105	1 2 6	L	> 10 years
203	2010	<a href="#">7152.00</a>	Hazel Creek Lake	L1	Y	518.00	Acres	AQL	Chlorophyll-a (W)	Rural NPS	Adair	10280201	1 2	L	> 10 years
204	2018	<a href="#">7152.00</a>	Hazel Creek Lake	L1	Y	518.00	Acres	AQL	Nitrogen, Total (W)	Nonpoint Source	Adair	10280201	1 2	L	> 10 years
205	2020	<a href="#">7387.00</a>	Hazel Hill Lake	L3	Y	62.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Johnson	10300104	1	L	> 10 years
206	2016	<a href="#">2196.00</a>	Headwater Div. Chan.	P	Y	20.30	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Cape Girardeau	07140105	2	L	> 10 years
207	2008	<a href="#">0848.00</a>	Heaths Cr.	P	Y	21.00	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Pettis/Cooper	10300103		M	2026 - 2030
208	2006	<a href="#">3226.00</a>	Hickory Cr.	P	Y	4.90	Miles	WBC A	Escherichia coli (W)	Rural NPS	Newton	11070207	5	L	> 10 years
209	2020	<a href="#">7190.00</a>	Higginsville Reservoir (South)	L1	Y	147.10	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Lafayette	10300104	1 2	L	> 10 years

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210	2012	<a href="#">1008.00</a>	Hinkson Cr.	C	Y	18.80	Miles	WBC A	Escherichia coli (W)	Nonpoint Source	Boone	10300102		M	2026 - 2030
211	2016	<a href="#">1007.00</a>	Hinkson Cr.	P	Y	7.60	Miles	WBC B	Escherichia coli (W)	Nonpoint Source	Boone	10300102		M	2026 - 2030
212	2016	<a href="#">7193.00</a>	Holden City Lake	L1	Y	290.20	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Johnson	10300104	2	L	> 10 years
213	2012	<a href="#">1011.00</a>	Hominy Br.	C	Y	1.00	Miles	WBC B	Escherichia coli (W)	Rural NPS	Boone	10300102		M	2026 - 2030
214	2010	<a href="#">3169.00</a>	Honey Cr.	P	Y	16.50	Miles	WBC B	Escherichia coli (W)	Rural NPS	Lawrence	11070207	5	L	> 10 years
215	2010	<a href="#">3170.00</a>	Honey Cr.	C	Y	2.70	Miles	WBC B	Escherichia coli (W)	Rural NPS	Lawrence	11070207	5	L	> 10 years
216	2018	<a href="#">1251.00</a>	Honey Cr.	C	Y	8.50	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Henry	10290108		L	> 10 years
217	2010	<a href="#">1348.00</a>	Horse Cr.	P	Y	27.70	Miles	AQL	Aquatic Macroinvertebrate Bioassessments/ Unknown (W)	Source Unknown	Vernon/Cedar	10290106	3	L	> 10 years
218	2008	<a href="#">1348.00</a>	Horse Cr.	P	Y	27.70	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Vernon/Cedar	10290106		M	2026 - 2030
219	2014	<a href="#">3413.00</a>	Horseshoe Cr.	C	Y	5.80	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Lafayette/Jackson	10300101		M	2026 - 2030
220	2002	<a href="#">7388.00</a>	Hough Park Lake	L3	Y	10.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Cole	10300102		L	> 10 years
<b>221</b>	<b>2020</b>	<b><a href="#">7029.00</a></b>	<b>Hunnewell Lake</b>	<b>L3</b>	<b>Y</b>	<b>228.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Shelby</b>	<b>07110004</b>	<b>1 4</b>	L	> 10 years
222	2012	<a href="#">7029.00</a>	Hunnewell Lake	L3	Y	228.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Shelby	07110004		L	> 10 years
223	2010	<a href="#">0420.00</a>	Indian Cr.	C	Y	3.40	Miles	AQL	Chloride (W)	Road/Bridge Runoff, Non-construction	Jackson	10300101		M	2026 - 2030
224	2002	<a href="#">0420.00</a>	Indian Cr.	C	Y	3.40	Miles	WBC A	Escherichia coli (W)	Leawood, KS WWTP	Jackson	10300101		H	2023
225	2008	<a href="#">7389.00</a>	Indian Creek Community Lake	L3	Y	185.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Livingston	10280101		L	> 10 years
<b>226</b>	<b>2020</b>	<b><a href="#">7288.00</a></b>	<b>Indian Lake</b>	<b>L3</b>	<b>Y</b>	<b>279.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Crawford</b>	<b>07140103</b>	<b>1 6</b>	L	> 10 years
<b>227</b>	<b>2020</b>	<b><a href="#">7391.00</a></b>	<b>Jackrabbit Lake</b>	<b>L3</b>	<b>Y</b>	<b>28.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Jackson</b>	<b>10290108</b>	<b>1 6</b>	L	> 10 years
228	2014	<a href="#">3223.00</a>	Jacobs Br.	P	Y	1.60	Miles	AQL	Cadmium (S)	Tri-State Mining District	Newton	11070207		M	2026 - 2030
229	2014	<a href="#">3223.00</a>	Jacobs Br.	P	Y	1.60	Miles	AQL	Cadmium (W)	Tri-State Mining District	Newton	11070207		M	2026 - 2030
230	2014	<a href="#">3223.00</a>	Jacobs Br.	P	Y	1.60	Miles	AQL	Lead (S)	Tri-State Mining District	Newton	11070207		M	2026 - 2030
231	2014	<a href="#">3223.00</a>	Jacobs Br.	P	Y	1.60	Miles	AQL	Zinc (S)	Tri-State Mining District	Newton	11070207		M	2026 - 2030
232	2012	<a href="#">3223.00</a>	Jacobs Br.	P	Y	1.60	Miles	AQL	Zinc (W)	Tri-State Mining District	Newton	11070207		M	2026 - 2030
<b>233</b>	<b>2020</b>	<b><a href="#">7104.00</a></b>	<b>Jamesport City Lake</b>	<b>L1</b>	<b>Y</b>	<b>16.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Daviess</b>	<b>10280101</b>	<b>1 2 6</b>	L	> 10 years
<b>234</b>	<b>2020</b>	<b><a href="#">7105.00</a></b>	<b>Jamesport Community Lake</b>	<b>L1</b>	<b>Y</b>	<b>27.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Daviess</b>	<b>10280101</b>	<b>1 2 6</b>	L	> 10 years
<b>235</b>	<b>2020</b>	<b><a href="#">2365.00</a></b>	<b>James R.</b>	<b>P</b>	<b>Y</b>	<b>39.00</b>	<b>Miles</b>	<b>WBC A</b>	<b>Escherichia coli (W)</b>	<b>Source Unknown</b>	<b>Greene</b>	<b>11010002</b>	<b>2</b>	L	> 10 years
236	2012	<a href="#">3207.00</a>	Jenkins Cr.	P	Y	2.80	Miles	WBC A	Escherichia coli (W)	Rural NPS	Jasper	11070207	5	L	> 10 years
237	2014	<a href="#">3208.00</a>	Jenkins Cr.	C	Y	4.80	Miles	WBC A	Escherichia coli (W)	Rural NPS	Newton/Jasper	11070207	5	L	> 10 years
238	2012	<a href="#">3205.00</a>	Jones Cr.	P	Y	7.50	Miles	WBC A	Escherichia coli (W)	Rural NPS	Newton/Jasper	11070207	5	L	> 10 years
239	2016	<a href="#">5006.00</a>	Joplin Creek	C	Y	3.90	Miles	AQL	Cadmium (W)	Mill Tailings	Jasper	11070207		L	> 10 years
240	2018	<a href="#">5006.00</a>	Joplin Creek	C	Y	3.90	Miles	AQL	Zinc (W)	Mill Tailings	Jasper	11070207		L	> 10 years
241	2014	<a href="#">3374.00</a>	Jordan Cr.	P	Y	3.80	Miles	AQL	Polycyclic Aromatic Hydrocarbons-PAHs (S)	Urban NPS	Greene	11010002		L	> 10 years
242	2012	<a href="#">3592.00</a>	Keifer Cr.	P	Y	1.20	Miles	WBC A	Escherichia coli (W)	Rural NPS	St. Louis	07140102		M	2026 - 2030
<b>243</b>	<b>2020</b>	<b><a href="#">7114.00</a></b>	<b>King City New Reservoir</b>	<b>L1</b>	<b>Y</b>	<b>25.40</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Gentry</b>	<b>10280101</b>	<b>1 2 6</b>	L	> 10 years
<b>244</b>	<b>2020</b>	<b><a href="#">7112.00</a></b>	<b>King Lake</b>	<b>L3</b>	<b>Y</b>	<b>204.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>DeKalb</b>	<b>10280101</b>	<b>1 2 6</b>	L	> 10 years
245	2016	<a href="#">7657.00</a>	Knox Village Lake	L3	Y	3.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Jackson	10300101		L	> 10 years
246	2016	<a href="#">2171.00</a>	Koen Cr.	C	Y	1.00	Miles	AQL	Lead (S)	Mine Tailings	St. Francois	07140104		H	2024
<b>247</b>	<b>2020</b>	<b><a href="#">7023.00</a></b>	<b>Labelle Lake #2</b>	<b>L1</b>	<b>Y</b>	<b>98.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Lewis</b>	<b>07110003</b>	<b>1 2</b>	L	> 10 years
248	2016	<a href="#">7023.00</a>	Labelle Lake #2	L1	Y	98.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Lewis	07110003	2	L	> 10 years
249	2010	<a href="#">7297.00</a>	Lac Capri	L3	Y	106.00	Acres	AQL	Nitrogen, Total (W)	Rural, Residential Areas	St. Francois	07140104	1	L	> 10 years
<b>250</b>	<b>2020</b>	<b><a href="#">7605.00</a></b>	<b>Lac Carmel</b>	<b>L3</b>	<b>Y</b>	<b>55.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>St. Francois</b>	<b>07140104</b>	<b>1 6</b>	L	> 10 years
<b>251</b>	<b>2020</b>	<b><a href="#">7614.00</a></b>	<b>Lac Marseilles</b>	<b>L3</b>	<b>Y</b>	<b>48.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>St. Francois</b>	<b>07140104</b>	<b>1 6</b>	L	> 10 years
<b>252</b>	<b>2020</b>	<b><a href="#">7606.00</a></b>	<b>Lac Shayne</b>	<b>L3</b>	<b>Y</b>	<b>76.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>St. Francois/Washington</b>	<b>07140104</b>	<b>1 6</b>	L	> 10 years
253	2016	<a href="#">7659.00</a>	Lake Boutin	L3	Y	20.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Cape Girardeau	07140105		L	> 10 years

Row #	Year	WBID	Waterbody	Class	Entire WB Imprd	WB Size	Units	IU	Pollutant	Source	County Up/Down	HUC 8	Comment	TMDL Priority	TMDL Schedule Year
254	2002	<a href="#">7469.00</a>	Lake Buteo	L3	Y	7.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Johnson	10300104		L	> 10 years
255	2020	<a href="#">7311.00</a>	Lake Girardeau	L3	Y	144.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Cape Girardeau	07140107	1	L	> 10 years
256	2020	<a href="#">7332.00</a>	Lake Killarney	L3	Y	61.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Iron	08020202	1	L	> 10 years
257	2018	<a href="#">7049.00</a>	Lake Lincoln	L3	Y	88.00	Acres	AQL	Chlorophyll-a (W)	Source Unknown	Lincoln	07110008	1	L	> 10 years
258	2020	<a href="#">7403.00</a>	Lake Nell	L3	Y	26.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Jackson	10290108	1 6	L	> 10 years
259	2020	<a href="#">7205.00</a>	Lake of the Ozarks	L2	Y	59520.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Camden	10290109	1 6	L	> 10 years
260	2002	<a href="#">7436.00</a>	Lake of the Woods	L3	Y	3.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Boone	10300102		L	> 10 years
261	2008	<a href="#">7629.00</a>	Lake of the Woods	UL	Y	7.00	Acres	GEN	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Jackson	10300101		L	> 10 years
262	2016	<a href="#">7132.00</a>	Lake Paho	L3	Y	273.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Mercer	10280102		L	> 10 years
263	2020	<a href="#">7312.00</a>	Lake Springfield	L3	Y	293.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Greene	11010002	1	L	> 10 years
264	2014	<a href="#">7055.00</a>	Lake Ste. Louise	L3	Y	71.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	St. Charles	07110009		L	> 10 years
265	2020	<a href="#">7054.00</a>	Lake St. Louis	L3	Y	444.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	St. Charles	07110009	1	L	> 10 years
266	2016	<a href="#">7035.00</a>	Lake Tom Sawyer	L3	Y	4.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Monroe	07110006		L	> 10 years
267	2020	<a href="#">7341.00</a>	Lake Tywappity	L3	Y	43.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Scott	08020204	1	L	> 10 years
268	2020	<a href="#">7336.00</a>	Lake Wappapello	L2	Y	7827.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Wayne	08020202	1	L	> 10 years
269	2020	<a href="#">7212.00</a>	Lake Winnebago	L3	Y	272.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Cass	10290108	1 6	L	> 10 years
270	2010	<a href="#">7212.00</a>	Lake Winnebago	L3	Y	272.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Cass	10290108		L	> 10 years
271	2006	<a href="#">0847.00</a>	Lamine R.	P	Y	64.00	Miles	WBC A	Escherichia coli (W)	Rural NPS	Morgan/Cooper	10300103		H	2023
272	2018	<a href="#">3105.00</a>	Lateral #2 Main Ditch	P	Y	11.50	Miles	AQL	Ammonia, Total (W)	Source Unknown	Stoddard	08020204		L	> 10 years
273	2006	<a href="#">3105.00</a>	Lateral #2 Main Ditch	P	Y	11.50	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Stoddard	08020204		M	2026 - 2030
274	2014	<a href="#">1529.00</a>	L. Beaver Cr.	C	Y	3.50	Miles	WBC A	Escherichia coli (W)	Source Unknown	Phelps	10290203		M	2026 - 2030
275	2008	<a href="#">1529.00</a>	L. Beaver Cr.	C	Y	3.50	Miles	AQL	Sedimentation/Siltation (S)	Smith Sand and Gravel	Phelps	10290203		M	2026 - 2030
276	2012	<a href="#">0422.00</a>	L. Blue R.	P	Y	35.10	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2024
277	2018	<a href="#">0422.00</a>	L. Blue R.	P	Y	35.10	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2024
278	2012	<a href="#">1003.00</a>	L. Bonne Femme Cr.	P	Y	9.00	Miles	WBC B	Escherichia coli (W)	Source Unknown	Boone	10300102		M	2026 - 2030
279	2006	<a href="#">1863.00</a>	L. Dry Fk.	P	N (1)	5.20	Miles	AQL	Oxygen, Dissolved (W)	Rolla SE WWTP	Phelps	07140102		M	2026 - 2030
280	2006	<a href="#">1864.00</a>	L. Dry Fk.	C	N (0.6)	4.70	Miles	AQL	Oxygen, Dissolved (W)	Rolla SE WWTP	Phelps	07140102		M	2026 - 2030
281	2008	<a href="#">1864.00</a>	L. Dry Fk.	C	Y	4.70	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Phelps	07140102		M	2026 - 2030
282	2006	<a href="#">1325.00</a>	L. Dry Wood Cr.	P	Y	20.50	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Vernon	10290104		M	2026 - 2030
283	2010	<a href="#">1326.00</a>	L. Dry Wood Cr.	C	Y	15.60	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Barton/Vernon	10290104		M	2026 - 2030
284	2012	<a href="#">3137.00</a>	Lee Rowe Ditch	C	Y	6.00	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Mississippi	08020201		M	2026 - 2030
285	2018	<a href="#">7346.00</a>	Lewis Lake	L3	Y	6.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Stoddard	08020204		L	> 10 years
286	2002	<a href="#">7020.00</a>	Lewistown Lake	L1	Y	35.00	Acres	DWS	Atrazine (W)	Rural NPS	Lewis	07110002	2	M	2026 - 2030
287	2020	<a href="#">7111.00</a>	Limpp Community State Lake	L3	Y	27.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Gentry	10240012	1 6	L	> 10 years
288	2012	<a href="#">3575.00</a>	Line Cr.	C	Y	7.00	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	Platte	10240011		H	2023
289	2018	<a href="#">4107.00</a>	Little Blue River tributary	C	Y	5.50	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		L	> 10 years
290	2020	<a href="#">7180.00</a>	Little Dixie Lake	L3	Y	176.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Callaway	10300102	1	L	> 10 years
291	2010	<a href="#">3279.00</a>	L. Lost Cr.	P	Y	5.80	Miles	WBC B	Escherichia coli (W)	Rural NPS	Newton	11070206		H	2023
292	2006	<a href="#">0606.00</a>	Locust Cr.	P	N (37.7)	91.70	Miles	WBC B	Escherichia coli (W)	Rural NPS	Putnam/Sullivan	10280103	2	H	2025
293	2012	<a href="#">2763.00</a>	Logan Cr.	P	N (6.1)	36.00	Miles	AQL	Lead (S)	Sweetwater Lead Mine/Mill	Reynolds	11010007		M	2026 - 2030
294	2006	<a href="#">0696.00</a>	Long Branch Cr.	C	N (1.8)	14.80	Miles	AQL	Oxygen, Dissolved (W)	Atlanta WWTP	Macon	10280203		M	2026 - 2030
295	2002	<a href="#">7097.00</a>	Longview Lake	L2	Y	953.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Jackson	10300101		L	> 10 years
296	2008	<a href="#">3652.00</a>	L. Osage R.	C	Y	23.60	Miles	WBC B	Escherichia coli (W)	Rural NPS	Vernon	10290103		M	2026 - 2030
297	2006	<a href="#">3278.00</a>	Lost Cr.	P	Y	8.50	Miles	WBC A	Escherichia coli (W)	Rural NPS	Newton	11070206		H	2021

Row #	Year	WBID	Waterbody	Class	Entire WB Imprd	WB Size	Units	IU	Pollutant	Source	County Up/Down	HUC 8	Comment	TMDL Priority	TMDL Schedule Year
298	2014	<a href="#">2854.00</a>	L. St. Francis R.	P	N (24.2)	32.40	Miles	AQL	Lead (S)	Catherine Lead Mine, pos. Mine La Motte	Madison	08020202	2	H	2024
<b>299</b>	<b>2020</b>	<b><a href="#">7168.00</a></b>	<b>Macon Lake</b>	<b>L3</b>	<b>Y</b>	<b>189.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Macon</b>	<b>10280203</b>	<b>1 2 6</b>	L	> 10 years
300	2006	<a href="#">2814.00</a>	Main Ditch	C	Y	13.00	Miles	AQL	pH (W)	Poplar Bluff WWTP	Butler	11010007		M	2026 - 2030
301	2006	<a href="#">2814.00</a>	Main Ditch	C	Y	13.00	Miles	AQL	Temperature, water (W)	Channelization	Butler	11010007		L	> 10 years
302	2012	<a href="#">3839.00</a>	Maline Cr.	C	Y	0.50	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis City	07140101		M	2026 - 2030
303	2016	<a href="#">3839.00</a>	Maline Cr.	C	Y	0.50	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis City	07140101		M	2026 - 2030
304	2016	<a href="#">7398.00</a>	Maple Leaf Lake	L3	Y	127.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Lafayette	10300104		L	> 10 years
305	2002	<a href="#">7033.00</a>	Mark Twain Lake	L2	Y	18132.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Ralls	07110005	2	L	> 10 years
306	2018	<a href="#">4109.00</a>	Martigney Creek	C	Y	1.60	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		M	2026 - 2030
307	2018	<a href="#">4109.00</a>	Martigney Creek	C	Y	1.60	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		M	2026 - 2030
308	2014	<a href="#">3596.00</a>	Mattese Cr.	P	Y	1.10	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140102		M	2026 - 2030
309	2016	<a href="#">1786.00</a>	McClanahan Cr.	C	Y	2.50	Miles	SCR	Escherichia coli (W)	Source Unknown	Perry	07140105		M	2026 - 2030
310	2016	<a href="#">1786.00</a>	McClanahan Cr.	C	Y	2.50	Miles	WBC B	Escherichia coli (W)	Source Unknown	Perry	07140105		M	2026 - 2030
<b>311</b>	<b>2020</b>	<b><a href="#">7013.00</a></b>	<b>Memphis Reservoir</b>	<b>L1</b>	<b>Y</b>	<b>41.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Scotland</b>	<b>07110002</b>	<b>1 2 6</b>	L	> 10 years
312	2008	<a href="#">2183.00</a>	Meramec R.	P	Y	22.80	Miles	AQL	Lead (S)	Old Lead belt tailings	St. Louis	07140102	2	M	2026 - 2030
313	2010	<a href="#">0123.00</a>	M. Fk. Salt R.	C	N (11.4)	25.40	Miles	AQL	Oxygen, Dissolved (W)	Macon WWTP	Macon	07110006		M	2026 - 2030
314	2008	<a href="#">1299.00</a>	Miami Cr.	P	Y	19.60	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Bates	10290102		M	2026 - 2030
315	2006	<a href="#">0468.00</a>	Middle Fk. Grand R.	P	Y	27.50	Miles	WBC A	Escherichia coli (W)	Rural NPS	Worth/Gentry	10280101		H	2023
316	2010	<a href="#">3262.00</a>	Middle Indian Cr.	C	Y	3.50	Miles	AQL	Aquatic Macroinvertebrate Bioassessments/ Unknown (W)	Source Unknown	Newton	11070208	3	M	2026 - 2030
317	2010	<a href="#">3263.00</a>	Middle Indian Cr.	P	Y	2.20	Miles	AQL	Aquatic Macroinvertebrate Bioassessments/ Unknown (W)	Source Unknown	Newton	11070208	3	M	2026 - 2030
318	2008	<a href="#">3263.00</a>	Middle Indian Cr.	P	Y	2.20	Miles	WBC B	Escherichia coli (W)	Rural NPS	Newton	11070208		H	2021
<b>319</b>	<b>2020</b>	<b><a href="#">7144.00</a></b>	<b>Milan Lake North</b>	<b>L1</b>	<b>Y</b>	<b>13.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Sullivan</b>	<b>10280103</b>	<b>1 2 6</b>	L	> 10 years
320	2016	<a href="#">4066.00</a>	Mill Creek	C	Y	3.40	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2024
321	2016	<a href="#">4066.00</a>	Mill Creek	C	Y	3.40	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2024
322	2016	<a href="#">4066.00</a>	Mill Creek	C	Y	3.40	Miles	AQL	Oxygen, Dissolved (W)	Urban Runoff/Storm Sewers	Jackson	10300101		M	2026 - 2030
323	2008	<a href="#">1604.00</a>	Missouri R.	P	N (33.9)	104.50	Miles	WBC B	Escherichia coli (W)	Municipal Point Source Discharges, Nonpoint Source	St. Charles/St. Louis	10300200	2	L	> 10 years
324	2010	<a href="#">0226.00</a>	Missouri R.	P	Y	184.50	Miles	WBC B	Escherichia coli (W)	Municipal Point Source Discharges, Nonpoint Source	Atchison/Jackson	10240011	2	L	> 10 years
325	2012	<a href="#">0356.00</a>	Missouri R.	P	Y	129.00	Miles	WBC B	Escherichia coli (W)	Municipal Point Source Discharges, Nonpoint Source	Jackson/Chariton	10300101	2	L	> 10 years
<b>326</b>	<b>2020</b>	<b><a href="#">7031.00</a></b>	<b>Monroe City Lake</b>	<b>L1</b>	<b>Y</b>	<b>94.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Ralls</b>	<b>07110007</b>	<b>1 2</b>	L	> 10 years
327	2014	<a href="#">7031.00</a>	Monroe City Lake	L1	Y	94.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Ralls	07110007	2	L	> 10 years
<b>328</b>	<b>2020</b>	<b><a href="#">7034.00</a></b>	<b>Monroe City Lake B</b>	<b>L1</b>	<b>Y</b>	<b>55.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Monroe</b>	<b>07110007</b>	<b>1 2</b>	L	> 10 years
329	2018	<a href="#">7301.00</a>	Monsanto Lake	L3	Y	18.00	Acres	AQL	Chlorophyll-a (W)	Source Unknown	St. Francois	07140104	1	L	> 10 years
330	2016	<a href="#">7301.00</a>	Monsanto Lake	L3	Y	18.00	Acres	AQL	Nitrogen, Total (W)	Source Unknown	St. Francois	07140104	1	L	> 10 years
331	2018	<a href="#">7301.00</a>	Monsanto Lake	L3	Y	18.00	Acres	AQL	Phosphorus, Total (W)	Source Unknown	St. Francois	07140104	1	L	> 10 years
<b>332</b>	<b>2020</b>	<b><a href="#">7208.00</a></b>	<b>Montrose Lake</b>	<b>L3</b>	<b>Y</b>	<b>1444.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Henry</b>	<b>10290108</b>	<b>1 6</b>	L	> 10 years
<b>333</b>	<b>2020</b>	<b><a href="#">7402.00</a></b>	<b>Mozingo Lake</b>	<b>L1</b>	<b>Y</b>	<b>998.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Nodaway</b>	<b>10240013</b>	<b>1 2</b>	L	> 10 years
334	2010	<a href="#">7402.00</a>	Mozingo Lake	L1	Y	998.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Nodaway	10240013	2	L	> 10 years
335	2018	<a href="#">0853.00</a>	Muddy Cr.	P	Y	62.20	Miles	WBC B	Escherichia coli (W)	Rural NPS	Pettis	10300103		M	2026 - 2030
<b>336</b>	<b>2020</b>	<b><a href="#">7136.00</a></b>	<b>New Marcelline City Lake</b>	<b>L1</b>	<b>Y</b>	<b>160.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Chariton</b>	<b>10280103</b>	<b>1 2</b>	L	> 10 years
337	2016	<a href="#">0158.00</a>	N. Fk. Cuivre R.	P	Y	25.10	Miles	WBC A	Escherichia coli (W)	Rural NPS	Pike/Lincoln	07110008		H	2020

Row #	Year	WBID	Waterbody	Class	Entire WB Imprd	WB Size	Units	IU	Pollutant	Source	County Up/Down	HUC 8	Comment	TMDL Priority	TMDL Schedule Year
338	2018	<a href="#">0110.00</a>	N. Fk. Salt R.	P	Y	84.90	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Shelby/Monroe	07110005	2	L	> 10 years
339	2008	<a href="#">3186.00</a>	N. Fk. Spring R.	P	Y	17.40	Miles	WBC B	Escherichia coli (W)	Rural NPS	Jasper	11070207	5	L	> 10 years
340	2008	<a href="#">3188.00</a>	N. Fk. Spring R.	C	Y	55.90	Miles	WBC B	Escherichia coli (W)	Rural NPS	Dade/Jasper	11070207	5	L	> 10 years
341	2006	<a href="#">3188.00</a>	N. Fk. Spring R.	C	Y	55.90	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Dade/Jasper	11070207		M	2026 - 2030
342	2012	<a href="#">3260.00</a>	N. Indian Cr.	P	Y	5.20	Miles	AQL	Aquatic Macroinvertebrate Bioassessments/ Unknown (W)	Source Unknown	Newton	11070208	3	M	2026 - 2030
343	2008	<a href="#">3260.00</a>	N. Indian Cr.	P	Y	5.20	Miles	WBC B	Escherichia coli (W)	Rural NPS	Newton	11070208		H	2021
344	2014	<a href="#">0227.00</a>	Nishnabotna R.	P	Y	10.20	Miles	WBC B	Escherichia coli (W)	Rural NPS	Atchison	10240004	2	M	2026 - 2030
345	2018	<a href="#">0227.00</a>	Nishnabotna R.	P	Y	10.20	Miles	SCR	Escherichia coli (W)	Rural NPS	Atchison	10240004	2	M	2026 - 2030
346	2014	<a href="#">7316.00</a>	Noblett Lake	L3	Y	26.00	Acres	AQL	Chlorophyll-a (W)	Nonpoint Source	Douglas	11010006	1	L	> 10 years
347	2002	<a href="#">7316.00</a>	Noblett Lake	L3	Y	26.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Douglas	11010006		L	> 10 years
348	2014	<a href="#">7316.00</a>	Noblett Lake	L3	Y	26.00	Acres	AQL	Phosphorus, Total (W)	Nonpoint Source	Douglas	11010006	1	L	> 10 years
349	2006	<a href="#">0550.00</a>	No Cr.	P	Y	28.70	Miles	WBC B	Escherichia coli (W)	Rural NPS	Grundy/Livingston	10280102		M	2026 - 2030
350	2010	<a href="#">0550.00</a>	No Cr.	P	Y	28.70	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Grundy/Livingston	10280102		M	2026 - 2030
351	2020	<a href="#">7076.00</a>	<b>Nodaway Lake</b>	<b>L3</b>	<b>Y</b>	<b>73.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Nodaway</b>	<b>10240013</b>	<b>1</b>	L	> 10 years
352	2010	<a href="#">0279.00</a>	Nodaway R.	P	Y	59.30	Miles	WBC B	Escherichia coli (W)	Rural NPS	Nodaway/Andrew	10240010		H	2020
353	2016	<a href="#">7317.00</a>	Norfork Lake	L2	Y	1000.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Ozark	11010006		L	> 10 years
354	2010	<a href="#">7109.00</a>	North Bethany City Reservoir	L3	Y	78.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Harrison	10280101		L	> 10 years
355	2014	<a href="#">3811.00</a>	North Branch Wilsons Cr.	P	Y	3.80	Miles	AQL	Zinc (S)	Urban NPS	Greene	11010002		M	2026 - 2030
356	2020	<a href="#">7218.00</a>	<b>North Lake</b>	<b>L3</b>	<b>Y</b>	<b>19.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Cass</b>	<b>10290108</b>	<b>1</b>	L	> 10 years
357	2016	<a href="#">1794.00</a>	Omete Cr.	C	Y	1.20	Miles	SCR	Escherichia coli (W)	Source Unknown	Perry	07140105		M	2026 - 2030
358	2016	<a href="#">1794.00</a>	Omete Cr.	C	Y	1.20	Miles	WBC B	Escherichia coli (W)	Source Unknown	Perry	07140105		M	2026 - 2030
359	2018	<a href="#">3190.00</a>	Opossum Cr.	C	Y	6.40	Miles	WBC B	Escherichia coli (W)	Rural NPS	Jasper	11070207	5	L	> 10 years
360	2016	<a href="#">1293.00</a>	Osage R.	P	Y	50.70	Miles	WBC A	Escherichia coli (W)	Source Unknown	Vernon/St. Clair	10290105		H	2020
361	2006	<a href="#">1373.00</a>	Panther Cr.	C	Y	9.70	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Polk/St. Clair	10290106		M	2026 - 2030
362	2020	<a href="#">7241.00</a>	<b>Peaceful Valley Lake</b>	<b>L3</b>	<b>Y</b>	<b>158.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Gasconade</b>	<b>10290203</b>	<b>1 6</b>	L	> 10 years
363	2008	<a href="#">2373.00</a>	Pearson Cr.	P	Y	8.00	Miles	AQL	Aquatic Macroinvertebrate Bioassessments/ Unknown (W)	Source Unknown	Greene	11010002	3	L	> 10 years
364	2006	<a href="#">2373.00</a>	Pearson Cr.	P	Y	8.00	Miles	WBC A	Escherichia coli (W)	Rural NPS	Greene	11010002		L	> 10 years
365	2016	<a href="#">0099.00</a>	Peno Cr.	C	Y	14.40	Miles	AQL	Oxygen, Dissolved (W)	Northeast Correctional Center W/TP	Pike	07110007		M	2026 - 2030
366	2020	<a href="#">7273.00</a>	<b>Perry County Community Lake</b>	<b>L3</b>	<b>Y</b>	<b>89.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Perry</b>	<b>07140105</b>	<b>1</b>	L	> 10 years
367	2008	<a href="#">7628.00</a>	Perry Phillips Lake	UL	Y	32.00	Acres	GEN	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Boone	10300102		L	> 10 years
368	2002	<a href="#">0218.00</a>	Peruque Cr.	C	Y	10.90	Miles	AQL	Aquatic Macroinvertebrate Bioassessments/ Unknown (W)	Nonpoint Source	Warren/St. Charles	07110009	3	M	2026 - 2030
369	2012	<a href="#">0215.00</a>	Peruque Cr.	P1	Y	9.60	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	St. Charles	07110009		M	2026 - 2030
370	2016	<a href="#">0218.00</a>	Peruque Cr.	C	Y	10.90	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Warren/St. Charles	07110009		M	2026 - 2030
371	2018	<a href="#">0785.00</a>	Petite Saline Cr.	P	Y	21.00	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Cooper/Moniteau	10300102		L	> 10 years
372	2010	<a href="#">2815.00</a>	Pike Cr.	C	Y	6.00	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Butler	11010007		M	2026 - 2030
373	2010	<a href="#">0312.00</a>	Platte R.	P	Y	142.40	Miles	WBC B	Escherichia coli (W)	Rural NPS	Worth/Platte	10240012	2	H	2020
374	2012	<a href="#">1327.00</a>	Pleasant Run Cr.	C	Y	7.60	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Vernon	10290104		M	2026 - 2030
375	2006	<a href="#">3120.00</a>	Pole Cat Slough	P	Y	12.60	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Dunklin	08020204		M	2026 - 2030
376	2014	<a href="#">3120.00</a>	Pole Cat Slough	P	Y	12.60	Miles	AQL	Temperature, water (W)	Source Unknown	Dunklin	08020204		M	2026 - 2030
377	2020	<a href="#">7238.00</a>	<b>Pomme de Terre Lake</b>	<b>L2</b>	<b>Y</b>	<b>7820.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Hickory/Polk</b>	<b>10290107</b>	<b>1</b>	L	> 10 years
378	2020	<a href="#">7118.00</a>	<b>Pony Express Lake</b>	<b>L3</b>	<b>Y</b>	<b>240.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>DeKalb</b>	<b>10280101</b>	<b>1 6</b>	L	> 10 years
379	2020	<a href="#">7755.00</a>	<b>Prairie Lake</b>	<b>L3</b>	<b>Y</b>	<b>22.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>St. Charles</b>	<b>07110009</b>	<b>1 6</b>	L	> 10 years
380	2020	<a href="#">7213.00</a>	<b>Raintree Lake</b>	<b>L3</b>	<b>Y</b>	<b>248.10</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Cass</b>	<b>10290108</b>	<b>1</b>	L	> 10 years
381	2020	<a href="#">7083.00</a>	<b>Ray County Community Lake</b>	<b>L3</b>	<b>Y</b>	<b>23.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Ray</b>	<b>10300101</b>	<b>1</b>	L	> 10 years
382	2018	<a href="#">0743.00</a>	Renfro Cr.	C	Y	1.50	Miles	AQL	Oxygen, Dissolved (W)	Abandoned Mine Lands and Rural NPS	Callaway/Boone	10300102		L	> 10 years
383	2016	<a href="#">7204.00</a>	Rinquelin Trail Community Lake	L3	Y	27.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Maries	10290111		L	> 10 years



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384	2006	<a href="#">1710.00</a>	River des Peres	P	Y	2.60	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis City	07140101		H	2025
385	2006	<a href="#">3972.00</a>	River des Peres	C	Y	13.60	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		H	2025
386	2012	<a href="#">1710.00</a>	River des Peres	P	Y	2.60	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis City	07140101		M	2026 - 2030
387	2016	<a href="#">3972.00</a>	River des Peres	C	Y	13.60	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		M	2026 - 2030
388	2016	<a href="#">3972.00</a>	River des Peres	C	Y	13.60	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		M	2026 - 2030
389	2018	<a href="#">4111.00</a>	River des Peres tributary	C	Y	1.80	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		L	> 10 years
390	2018	<a href="#">4111.00</a>	River des Peres tributary	C	Y	1.80	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		L	> 10 years
391	2018	<a href="#">4111.00</a>	River des Peres tributary	C	Y	1.80	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		M	2026 - 2030
392	2018	<a href="#">4106.00</a>	Rock Creek	C	Y	6.20	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson/Clay	10300101		H	2023
393	2018	<a href="#">4106.00</a>	Rock Creek	C	Y	6.20	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson/Clay	10300101		H	2023
<b>394</b>	<b>2020</b>	<b><a href="#">7086.00</a></b>	<b>Rocky Hollow Lake</b>	<b>L3</b>	<b>Y</b>	<b>20.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Clay</b>	<b>10300101</b>	<b>1</b>	L	> 10 years
<b>395</b>	<b>2020</b>	<b><a href="#">7164.00</a></b>	<b>Rothwell Lake</b>	<b>L3</b>	<b>Y</b>	<b>27.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Randolph</b>	<b>10280203</b>	<b>1</b>	L	> 10 years
396	2018	<a href="#">3577.00</a>	Sadler Br.	C	Y	0.80	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Polk	10290106		L	> 10 years
397	2010	<a href="#">0594.00</a>	Salt Cr.	C	Y	14.90	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Chariton	10280103		M	2026 - 2030
398	2014	<a href="#">0893.00</a>	Salt Fk.	P	Y	26.70	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Saline	10300104		M	2026 - 2030
399	2012	<a href="#">2113.00</a>	Salt Pine Cr.	C	Y	1.20	Miles	AQL	Lead (S)	Barite tailings pond	Washington	07140104		M	2026 - 2030
400	2012	<a href="#">2113.00</a>	Salt Pine Cr.	C	Y	1.20	Miles	AQL	Zinc (S)	Barite tailings pond	Washington	07140104		M	2026 - 2030
401	2012	<a href="#">0103.00</a>	Salt R.	P1	Y	9.30	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Ralls	07110007	2	L	> 10 years
402	2008	<a href="#">0091.00</a>	Salt R.	P	Y	29.00	Miles	AQL	Oxygen, Dissolved (W)	Mark Twain Lake re-regulation dam	Ralls/Pike	07110007	2	L	> 10 years
403	2014	<a href="#">0103.00</a>	Salt R.	P1	Y	9.30	Miles	AQL	Oxygen, Dissolved (W)	Cannon Dam	Ralls	07110007	2	L	> 10 years
404	2006	<a href="#">0655.00</a>	S. Blackbird Cr.	C	Y	13.00	Miles	AQL	Ammonia, Total (W)	Source Unknown	Putnam	10280201		M	2026 - 2030
405	2006	<a href="#">0142.00</a>	S. Fk. Salt R.	C	N (20.1)	40.10	Miles	AQL	Oxygen, Dissolved (W)	Mexico WWTP, Rural Nonpoint Source	Callaway/Audrain	07110006		M	2026 - 2030
<b>406</b>	<b>2020</b>	<b><a href="#">0141.00</a></b>	<b>S. Fk. Salt R.</b>	<b>P</b>	<b>Y</b>	<b>9.30</b>	<b>Miles</b>	<b>AQL</b>	<b>pH (W)</b>	<b>Nonpoint Source</b>	<b>Monroe</b>	<b>07110006</b>		L	> 10 years
407	2006	<a href="#">1249.00</a>	S. Grand R.	P	Y	66.80	Miles	WBC B	Escherichia coli (W)	Rural NPS	Cass/Henry	10290108		H	2020
<b>408</b>	<b>2020</b>	<b><a href="#">2865.00</a></b>	<b>Shays Cr.</b>	<b>C</b>	<b>Y</b>	<b>1.70</b>	<b>Miles</b>	<b>AQL</b>	<b>Lead (S)</b>	<b>Mine La Motte</b>	<b>Madison</b>	<b>08020202</b>		L	> 10 years
<b>409</b>	<b>2020</b>	<b><a href="#">7042.00</a></b>	<b>Shelbina Lake</b>	<b>L1</b>	<b>Y</b>	<b>45.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Shelby</b>	<b>07110005</b>	<b>1 2</b>	L	> 10 years
<b>410</b>	<b>2020</b>	<b><a href="#">7036.00</a></b>	<b>Shelbyville Lake</b>	<b>L1</b>	<b>Y</b>	<b>32.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Shelby</b>	<b>07110005</b>	<b>1 2 6</b>	L	> 10 years
<b>411</b>	<b>2020</b>	<b><a href="#">7333.00</a></b>	<b>Shepard Mountain Lake</b>	<b>L1</b>	<b>Y</b>	<b>21.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Iron</b>	<b>08020202</b>	<b>1 2 6</b>	L	> 10 years
412	2014	<a href="#">3222.00</a>	Shoal Cr.	P	N (3.8)	50.50	Miles	AQL	Zinc (S)	Mill Tailings	Newton	11070207	2	M	2026 - 2030
413	2014	<a href="#">3981.00</a>	Shoal Creek tributary	C	Y	1.90	Miles	GEN	Cadmium (W)	Tanyard Hollow Pits	Jasper/Newton	11070207		M	2026 - 2030
<b>414</b>	<b>2020</b>	<b><a href="#">3982.00</a></b>	<b>Shoal Creek tributary</b>	<b>C</b>	<b>Y</b>	<b>2.20</b>	<b>Miles</b>	<b>AQL</b>	<b>Cadmium (W)</b>	<b>Mill Tailings</b>	<b>Jasper</b>	<b>11070207</b>		M	2026 - 2030
415	2014	<a href="#">3981.00</a>	Shoal Creek tributary	C	Y	1.90	Miles	GEN	Zinc (W)	Tanyard Hollow Pits	Jasper/Newton	11070207		M	2026 - 2030
416	2014	<a href="#">3982.00</a>	Shoal Creek tributary	C	Y	2.20	Miles	AQL	Zinc (W)	Mill Tailings	Jasper	11070207		M	2026 - 2030
417	2018	<a href="#">3244.00</a>	Silver Cr.	P	Y	1.90	Miles	AQL	Zinc (S)	Mill Tailings	Newton	11070207		M	2026 - 2030
<b>418</b>	<b>2020</b>	<b><a href="#">7502.00</a></b>	<b>Simpson Park Lake</b>	<b>L3</b>	<b>Y</b>	<b>64.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>St. Louis</b>	<b>07140102</b>	<b>1 6</b>	L	> 10 years
419	2012	<a href="#">3259.00</a>	S. Indian Cr.	P	Y	8.70	Miles	AQL	Aquatic Macroinvertebrate Bioassessments/ Unknown (W)	Source Unknown	McDonald/Newton	11070208	3	M	2026 - 2030
420	2008	<a href="#">3259.00</a>	S. Indian Cr.	P	Y	8.70	Miles	WBC B	Escherichia coli (W)	Rural NPS	McDonald/Newton	11070208		H	2021
421	2014	<a href="#">3754.00</a>	Slater Br.	C	Y	3.70	Miles	WBC B	Escherichia coli (W)	Nonpoint Source	Jasper	11070207	5	L	> 10 years
422	2006	<a href="#">0399.00</a>	Sni-a-bar Cr.	P	Y	36.60	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Jackson/Lafayette	10300101		M	2026 - 2030
423	2012	<a href="#">0224.00</a>	Spencer Cr.	C	Y	1.50	Miles	AQL	Chloride (W)	Road/Bridge Runoff, Non-construction	St. Charles	07110009		M	2026 - 2030
424	2016	<a href="#">5007.00</a>	Spring Branch	C	N (1.4)	3.10	Miles	WBC B	Escherichia coli (W)	Source Unknown	St. Louis	07140102		H	2024
425	2018	<a href="#">5004.00</a>	Spring Branch	C	Y	6.70	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2024

Row #	Year	WBID	Waterbody	Class	Entire WB Imprd	WB Size	Units	IU	Pollutant	Source	County Up/Down	HUC 8	Comment	TMDL Priority	TMDL Schedule Year
426	2018	<a href="#">5004.00</a>	Spring Branch	C	Y	6.70	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jackson	10300101		H	2024
427	2006	<a href="#">3160.00</a>	Spring R.	P	Y	61.70	Miles	WBC A	Escherichia coli (W)	Rural NPS	Lawrence/Jasper	11070207	5	L	> 10 years
428	2010	<a href="#">3164.00</a>	Spring R.	P	Y	8.80	Miles	WBC A	Escherichia coli (W)	Rural NPS	Lawrence	11070207	5	L	> 10 years
429	2010	<a href="#">3165.00</a>	Spring R.	P	Y	11.90	Miles	WBC A	Escherichia coli (W)	Rural NPS	Lawrence	11070207	5	L	> 10 years
430	2018	<a href="#">4112.00</a>	Spring River tributary	C	Y	4.00	Miles	WBC B	Escherichia coli (W)	Nonpoint Source	Jasper	11070207	5	L	> 10 years
431	2018	<a href="#">2677.00</a>	Spring Valley Cr.	P	Y	10.80	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Shannon	11010008		L	> 10 years
<b>432</b>	<b>2020</b>	<b><a href="#">7149.00</a></b>	<b>Sterling Price Community Lake</b>	<b>L3</b>	<b>Y</b>	<b>23.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Chariton</b>	<b>10280202</b>	<b>1 6</b>	L	> 10 years
433	2006	<a href="#">3135.00</a>	Stevenson Bayou	C	Y	6.40	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Mississippi	08020201		M	2026 - 2030
434	2012	<a href="#">2835.00</a>	St. Francis R.	P	N (8.4)	93.10	Miles	CLF	Temperature, water (W)	Source Unknown	St. Francois	08020202		M	2026 - 2030
435	2006	<a href="#">3138.00</a>	St. Johns Ditch	P	Y	15.30	Miles	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	New Madrid	08020201		L	> 10 years
436	2006	<a href="#">0959.00</a>	Straight Fk.	C	Y	6.00	Miles	AQL	Oxygen, Dissolved (W)	Versailles WWTP	Morgan	10300102		H	2025
437	2006	<a href="#">0686.00</a>	Sugar Cr.	P	Y	6.80	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Randolph	10280203		M	2026 - 2030
438	2018	<a href="#">0686.00</a>	Sugar Cr.	P	Y	6.80	Miles	AQL	Sulfate + Chloride (W)	Source Unknown	Randolph	10280203		L	> 10 years
439	2018	<a href="#">4108.00</a>	Sugar Creek	C	Y	1.80	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		M	2026 - 2030
440	2018	<a href="#">4108.00</a>	Sugar Creek	C	Y	1.80	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		M	2026 - 2030
441	2014	<a href="#">7166.00</a>	Sugar Creek Lake	L1	Y	308.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Randolph	10280203	2	L	> 10 years
<b>442</b>	<b>2020</b>	<b><a href="#">7294.00</a></b>	<b>Sunnen Lake</b>	<b>L3</b>	<b>Y</b>	<b>206.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Washington</b>	<b>07140104</b>	<b>1 6</b>	L	> 10 years
443	2006	<a href="#">7399.00</a>	Sunset Lake	L3	Y	6.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Cole	10300102		L	> 10 years
444	2002	<a href="#">7313.00</a>	Table Rock Lake	L2	Y	41747.00	Acres	AQL	Chlorophyll-a (W)	Municipal Point Source Discharges, Nonpoint Source	Stone	11010001	1	H	2025
445	2002	<a href="#">7313.00</a>	Table Rock Lake	L2	Y	41747.00	Acres	AQL	Nitrogen, Total (W)	Municipal Point Source Discharges, Nonpoint Source	Stone	11010001	1	H	2025
446	2002	<a href="#">7313.00</a>	Table Rock Lake	L2	Y	41747.00	Acres	AQL	Nutrient/Eutrophication Biol. Indicators (W)	Municipal Point Source Discharges, Nonpoint Source	Stone	11010001	1	H	2025
447	2016	<a href="#">7352.00</a>	Thirtyfour Corner Blue Hole	L3	Y	9.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Mississippi	08010100		L	> 10 years
<b>448</b>	<b>2020</b>	<b><a href="#">7173.00</a></b>	<b>Thomas Hill Reservoir</b>	<b>L2</b>	<b>Y</b>	<b>4400.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Randolph</b>	<b>10280203</b>	<b>1 2 6</b>	L	> 10 years
449	2008	<a href="#">0549.00</a>	Thompson R.	P	N (5.2)	70.60	Miles	WBC B	Escherichia coli (W)	Rural NPS	Harrison	10280102	2	H	2021
450	2012	<a href="#">3243.00</a>	Thurman Cr.	P	Y	3.00	Miles	WBC B	Escherichia coli (W)	Rural NPS	Newton	11070207	5	L	> 10 years
451	2018	<a href="#">2114.00</a>	Trib. Old Mines Cr.	C	Y	1.50	Miles	AQL	Lead (S)	Barite tailings pond	Washington	07140104		M	2026 - 2030
452	2010	<a href="#">2114.00</a>	Trib. Old Mines Cr.	C	Y	1.50	Miles	AQL	Sedimentation/Siltation (S)	Barite tailings pond	Washington	07140104		M	2026 - 2030
453	2018	<a href="#">2114.00</a>	Trib. Old Mines Cr.	C	Y	1.50	Miles	AQL	Zinc (S)	Barite tailings pond	Washington	07140104		M	2026 - 2030
454	2010	<a href="#">1420.00</a>	Trib. to Goose Cr.	C	Y	3.00	Miles	WBC B	Escherichia coli (W)	Rural NPS	Lawrence	10290106		H	2021
455	2006	<a href="#">3490.00</a>	Trib. to L. Muddy Cr.	C	Y	1.00	Miles	AQL	Chloride (W)	Tyson Foods	Pettis	10300103		L	> 10 years
456	2006	<a href="#">3589.00</a>	Trib. to Wolf Cr.	C	Y	1.50	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	St. Francois	08020202		M	2026 - 2030
457	2006	<a href="#">0074.00</a>	Troublesome Cr.	C	N (6.1)	41.30	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Knox	07110003		M	2026 - 2030
458	2012	<a href="#">0074.00</a>	Troublesome Cr.	C	Y	41.30	Miles	AQL	Sedimentation/Siltation (S)	Habitat Mod. - other than Hydromod.	Knox/Marion	07110003		L	> 10 years
459	2012	<a href="#">3175.00</a>	Truitt Cr.	C	Y	6.40	Miles	SCR	Escherichia coli (W)	Rural NPS	Lawrence	11070207	5	L	> 10 years
460	2016	<a href="#">3174.00</a>	Truitt Cr.	P	Y	1.50	Miles	WBC B	Escherichia coli (W)	Rural NPS	Lawrence	11070207	5	L	> 10 years
461	2018	<a href="#">2985.00</a>	Turkey Cr.	C	N (2.3)	3.10	Miles	AQL	Ammonia, Total (W)	Puxico WWTF	Stoddard	08020203		L	> 10 years
462	2006	<a href="#">3216.00</a>	Turkey Cr.	P	Y	7.70	Miles	AQL	Cadmium (S)	Tri-State Mining District	Jasper	11070207		H	2021
463	2006	<a href="#">3217.00</a>	Turkey Cr.	P	Y	6.10	Miles	AQL	Cadmium (S)	Tri-State Mining District	Jasper	11070207		H	2021
464	2016	<a href="#">3282.00</a>	Turkey Cr.	P	Y	2.40	Miles	AQL	Cadmium (S)	Bonne Terre chat pile	St. Francois	07140104		M	2026 - 2030
465	2006	<a href="#">3216.00</a>	Turkey Cr.	P	Y	7.70	Miles	AQL	Cadmium (W)	Tri-State Mining District	Jasper	11070207		H	2021
466	2006	<a href="#">3282.00</a>	Turkey Cr.	P	Y	2.40	Miles	AQL	Cadmium (W)	Bonne Terre chat pile	St. Francois	07140104		M	2026 - 2030
467	2016	<a href="#">3282.00</a>	Turkey Cr.	P	Y	2.40	Miles	AQL	Copper (S)	Bonne Terre chat pile	St. Francois	07140104		M	2026 - 2030

Row #	Year	WBID	Waterbody	Class	Entire WB Imprd	WB Size	Units	IU	Pollutant	Source	County Up/Down	HUC 8	Comment	TMDL Priority	TMDL Schedule Year
468	2006	<a href="#">3216.00</a>	Turkey Cr.	P	N (4.5)	7.70	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jasper	11070207	5	L	> 10 years
469	2006	<a href="#">3217.00</a>	Turkey Cr.	P	Y	6.10	Miles	WBC A	Escherichia coli (W)	Urban Runoff/Storm Sewers	Jasper	11070207	5	L	> 10 years
470	2012	<a href="#">0751.00</a>	Turkey Cr.	C	Y	6.30	Miles	WBC A	Escherichia coli (W)	Source Unknown	Boone	10300102		H	2023
471	2006	<a href="#">3217.00</a>	Turkey Cr.	P	Y	6.10	Miles	AQL	Lead (S)	Tri-State Mining District	Jasper	11070207		H	2021
472	2008	<a href="#">3216.00</a>	Turkey Cr.	P	Y	7.70	Miles	AQL	Lead (S)	Tri-State Mining District	Jasper	11070207		H	2021
473	2016	<a href="#">3282.00</a>	Turkey Cr.	P	Y	2.40	Miles	AQL	Lead (S)	Bonne Terre chat pile	St. Francois	07140104		M	2026 - 2030
474	2006	<a href="#">3282.00</a>	Turkey Cr.	P	Y	2.40	Miles	AQL	Lead (W)	Bonne Terre chat pile	St. Francois	07140104		M	2026 - 2030
475	2016	<a href="#">3282.00</a>	Turkey Cr.	P	Y	2.40	Miles	AQL	Nickel (S)	Bonne Terre chat pile	St. Francois	07140104		M	2026 - 2030
476	2018	<a href="#">2985.00</a>	Turkey Cr.	C	N (2.3)	3.10	Miles	AQL	Oxygen, Dissolved (W)	Puxico WWTF	Stoddard	08020203		L	> 10 years
477	2006	<a href="#">3216.00</a>	Turkey Cr.	P	Y	7.70	Miles	AQL	Zinc (S)	Tri-State Mining District	Jasper	11070207		H	2021
478	2006	<a href="#">3217.00</a>	Turkey Cr.	P	Y	6.10	Miles	AQL	Zinc (S)	Tri-State Mining District	Jasper	11070207		H	2021
479	2016	<a href="#">3282.00</a>	Turkey Cr.	P	Y	2.40	Miles	AQL	Zinc (S)	Bonne Terre chat pile	St. Francois	07140104		M	2026 - 2030
480	2006	<a href="#">3282.00</a>	Turkey Cr.	P	N (1.2)	2.40	Miles	AQL	Zinc (W)	Bonne Terre chat pile	St. Francois	07140104		M	2026 - 2030
481	2014	<a href="#">3983.00</a>	Turkey Creek tributary	C	Y	2.90	Miles	GEN	Cadmium (S)	Abandoned Smelter Site	Jasper	11070207		H	2021
482	2016	<a href="#">3983.00</a>	Turkey Creek tributary	C	Y	2.90	Miles	GEN	Cadmium (W)	Abandoned Smelter Site	Jasper	11070207		H	2021
483	2016	<a href="#">3984.00</a>	Turkey Creek tributary	C	Y	2.20	Miles	GEN	Cadmium (W)	Mill Tailings	Jasper	11070207		H	2021
484	2014	<a href="#">3983.00</a>	Turkey Creek tributary	C	Y	2.90	Miles	GEN	Lead (S)	Abandoned Smelter Site	Jasper	11070207		H	2021
485	2014	<a href="#">3983.00</a>	Turkey Creek tributary	C	Y	2.90	Miles	GEN	Zinc (S)	Abandoned Smelter Site	Jasper	11070207		H	2021
486	2014	<a href="#">3983.00</a>	Turkey Creek tributary	C	Y	2.90	Miles	GEN	Zinc (W)	Abandoned Smelter Site	Jasper	11070207		H	2021
487	2014	<a href="#">3984.00</a>	Turkey Creek tributary	C	Y	2.20	Miles	GEN	Zinc (W)	Leadwood Hollow pits	Jasper	11070207		H	2021
488	2014	<a href="#">3985.00</a>	Turkey Creek tributary	C	Y	1.60	Miles	GEN	Zinc (W)	Chitwood Hollow pits	Jasper	11070207		H	2021
489	2010	<a href="#">1414.00</a>	Turnback Cr.	P	Y	19.90	Miles	WBC A	Escherichia coli (W)	Rural NPS	Lawrence/Dade	10290106		H	2021
490	2016	<a href="#">4079.00</a>	Twomile Creek	C	Y	5.60	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		M	2026 - 2030
<b>491</b>	<b>2020</b>	<b><a href="#">7154.00</a></b>	<b>Unionville Reservoir</b>	<b>L3</b>	<b>Y</b>	<b>74.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Putnam</b>	<b>10280201</b>	<b>1 6</b>	L	> 10 years
492	2016	<a href="#">7099.00</a>	Unity Village Lake #2	L1	Y	26.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Jackson	10300101	2	L	> 10 years
<b>493</b>	<b>2020</b>	<b><a href="#">7051.00</a></b>	<b>Vandalia Community Lake</b>	<b>L3</b>	<b>Y</b>	<b>35.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Audrain</b>	<b>07110008</b>	<b>1</b>	L	> 10 years
<b>494</b>	<b>2020</b>	<b><a href="#">7032.00</a></b>	<b>Vandalia Reservoir</b>	<b>L1</b>	<b>Y</b>	<b>28.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>Pike</b>	<b>07110007</b>	<b>1 2</b>	L	> 10 years
495	2006	<a href="#">1708.00</a>	Watkins Creek	C	Y	6.40	Miles	AQL	Chloride (W)	Urban Runoff/Storm Sewers	St. Louis/St. Louis City	07140101		H	2025
496	2016	<a href="#">4097.00</a>	Watkins Creek tributary	C	Y	1.20	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		L	> 10 years
497	2016	<a href="#">4097.00</a>	Watkins Creek tributary	C	Y	1.20	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		L	> 10 years
498	2016	<a href="#">4098.00</a>	Watkins Creek tributary	C	Y	1.20	Miles	SCR	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		L	> 10 years
499	2016	<a href="#">4098.00</a>	Watkins Creek tributary	C	Y	1.20	Miles	WBC B	Escherichia coli (W)	Urban Runoff/Storm Sewers	St. Louis	07140101		L	> 10 years
<b>500</b>	<b>2020</b>	<b><a href="#">7072.00</a></b>	<b>Waukomis Lake</b>	<b>L3</b>	<b>Y</b>	<b>76.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Phosphorus, Total (W)</b>	<b>Nonpoint Source</b>	<b>Platte</b>	<b>10240011</b>	<b>1</b>	L	> 10 years
501	2012	<a href="#">7071.00</a>	Weatherby Lake	L3	Y	185.00	Acres	AQL	Chlorophyll-a (W)	Urban Runoff/Storm Sewers	Platte	10240011	1	L	> 10 years
502	2012	<a href="#">7071.00</a>	Weatherby Lake	L3	Y	185.00	Acres	HHP	Mercury in Fish Tissue (T)	Atmospheric Deposition - Toxics	Platte	10240011		L	> 10 years
503	2010	<a href="#">7071.00</a>	Weatherby Lake	L3	Y	185.00	Acres	AQL	Nitrogen, Total (W)	Urban Runoff/Storm Sewers	Platte	10240011	1	L	> 10 years
504	2014	<a href="#">7071.00</a>	Weatherby Lake	L3	Y	185.00	Acres	AQL	Phosphorus, Total (W)	Urban Runoff/Storm Sewers	Platte	10240011	1	L	> 10 years
505	2006	<a href="#">0560.00</a>	Weldon R.	P	Y	43.40	Miles	WBC B	Escherichia coli (W)	Rural NPS	Mercer/Grundy	10280102		H	2021
506	2006	<a href="#">1317.00</a>	W. Fk. Dry Wood Cr.	C	Y	8.10	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Vernon	10290104		M	2026 - 2030
507	2008	<a href="#">1504.00</a>	Whetstone Cr.	P	Y	12.20	Miles	AQL	Oxygen, Dissolved (W)	Rural NPS	Wright	10290201		H	2024
508	2010	<a href="#">3182.00</a>	White Oak Cr.	C	Y	18.00	Miles	WBC A	Escherichia coli (W)	Rural NPS	Lawrence/Jasper	11070207	5	L	> 10 years
509	2012	<a href="#">1700.00</a>	Wildhorse Cr.	C	Y	3.90	Miles	WBC B	Escherichia coli (W)	Rural, Residential Areas	St. Louis	10300200		M	2026 - 2030

Row #	Year	WBID	Waterbody	Class	Entire WB Imprd	WB Size	Units	IU	Pollutant	Source	County Up/Down	HUC 8	Comment	TMDL Priority	TMDL Schedule Year
510	2010	<a href="#">3171.00</a>	Williams Cr.	P	Y	1.00	Miles	WBC A	Escherichia coli (W)	Rural NPS	Lawrence	11070207	5	L	> 10 years
511	2010	<a href="#">3172.00</a>	Williams Cr.	P	Y	8.50	Miles	WBC A	Escherichia coli (W)	Rural NPS	Lawrence	11070207	5	L	> 10 years
512	2012	<a href="#">3594.00</a>	Williams Cr.	P	Y	1.00	Miles	WBC B	Escherichia coli (W)	Rural NPS	St. Louis	07140102		M	2026 - 2030
513	2014	<a href="#">3280.00</a>	Willow Br.	P	Y	2.20	Miles	AQL	Cadmium (S)	Mill Tailings	Newton	11070206		M	2026 - 2030
514	2010	<a href="#">3280.00</a>	Willow Br.	P	Y	2.20	Miles	WBC B	Escherichia coli (W)	Rural NPS	Newton	11070206		H	2021
515	2014	<a href="#">3280.00</a>	Willow Br.	P	Y	2.20	Miles	AQL	Zinc (S)	Mill Tailings	Newton	11070206		M	2026 - 2030
<b>516</b>	<b>2020</b>	<a href="#">7438.00</a>	<b>Willow Brook Lake</b>	<b>L1</b>	<b>Y</b>	<b>53.00</b>	<b>Acres</b>	<b>AQL</b>	<b>Chlorophyll-a (W)</b>	<b>Nonpoint Source</b>	<b>DeKalb</b>	<b>10280101</b>	<b>1 2</b>	L	> 10 years
517	2006	<a href="#">0955.00</a>	Willow Fk.	C	Y	6.80	Miles	AQL	Oxygen, Dissolved (W)	Tipton WWTP and Unknown Sources	Moniteau	10300102		H	2025
518	2006	<a href="#">0956.00</a>	Willow Fork tributary	C	Y	0.50	Miles	AQL	Oxygen, Dissolved (W)	Source Unknown	Moniteau	10300102		M	2026 - 2030
519	1998	<a href="#">2375.00</a>	Wilsons Cr.	P	Y	14.00	Miles	AQL	Aquatic Macroinvertebrate Bioassessments/ Unknown (W)	Nonpoint Source	Greene	11010002	3	L	> 10 years
520	2006	<a href="#">2375.00</a>	Wilsons Cr.	P	N (7.4)	14.00	Miles	WBC B	Escherichia coli (W)	Nonpoint Source	Greene	11010002		L	> 10 years
521	2014	<a href="#">2429.00</a>	Woods Fk.	C	Y	5.50	Miles	AQL	Fishes Bioassessments/ Unknown (W)	Source Unknown	Christian	11010003	3	M	2026 - 2030

#### Key To List:

Bolded rows are new listings for the 2020 listing cycle

Row #: Row number that is not unique to any water, but is simply a count of the rows (listings)

Year: Year this waterbody/pollutant pair was added to the 303(d) List

WBID: Unique waterbody identification number. Clicking the link will bring up a WQA Public Search webpage with the available data for that WBID

Waterbody: Name of the waterbody.

Class: Waterbody Classification in Missouri State Water Quality Standards: P - Permanently Flowing Waters, C - Intermittently Flowing Waters, L1 - Drinking Water Reservoirs, L2 - Large Multi-purpose Lakes,

L3 - Other Recreational Lakes, US - Unclassified Stream, UL - Unclassified Lake

Entire WB Imprd: Y= Yes the entire waterbody is considered impaired; N= No the entire waterbody is not considered impaired.

WB Size: Size of entire waterbody segment

IU: Impaired Use

AQL - Protection of Warm Water Aquatic Life ; CLF - Cool-Water Fishery ; CLD - Cold-Water Fishery ; DWS - Drinking Water Supply ; GEN - General Criteria ; HHP - Human-Health Protection (Fish Consumption) ;

SCR - Secondary Contact Recreation ; WBC A - Whole Body Contact Recreation A (Designated Public Swimming Areas) ; WBC B - Whole Body Contact Recreation B (Those areas not considered WBC A)

Pollutant: The reason/cause the water is impaired

Media Indicators: (W) - The pollutant is in the water ; (S) - The pollutant is in the sediment ; (T) - The pollutant is in the tissue of an organism ; If no media indicator is shown the pollutant is in the water

Source: The source of the pollutant causing the impairment

County Up/Down: The county of the upstream end and downstream end of the segment that is impaired. Clicking the link will bring up a map viewer displaying the location of the impaired portion of the waterbody.

Comment:

1 - Nutrient related impairment

2 - Water is a Public Drinking Water Supply

3 - This water is listed for either "Aquatic Macroinvertebrate Bioassessment/Unknown (W)" or "Fishes Bioassessment/Unknown (W)". This water lacks the necessary information

to point to a discrete pollutant and does not show signs of habitat impairment. Since the Department currently cannot point to a specific pollutant as the cause, the water is being listed for the observed effect as the reason the water is impaired.

4 - Trend analysis shows this water will exceed WQS within 5 years. See the 2020 Listing Methodology Document and Nutrient Implementation Plan for more information.

5 - This water is being prioritized as low for TMDL development due to 319 watershed management plans being implemented in the watershed.

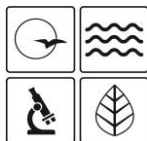
6 - Water was added to the 2020 list by EPA.

Missouri Department of Natural Resources, Water Protection Program, (573)751-1300, [www.dnr.mo.gov](http://www.dnr.mo.gov)

[http://apps5.mo.gov/mocwis\\_public/wqa/waterbodySearch.do](http://apps5.mo.gov/mocwis_public/wqa/waterbodySearch.do)

<http://dnr.mo.gov/env/esp/wqm/biologicalassessments.htm>

09/13/2021



**Missouri Department of Natural Resources**  
**2020 Section 303(d) List Summary Tables**

Number of Current Listings By Cycle		
Cycle First Listed Year		# of Listings
1998		1
2002		25
2006		89
2008		35
2010		41
2012		52
2014		50
2016		74
2018		53
2020		101
Total		521
Use Impairments for 2020 List		
Use	# of Impairments	%
AQL	303	58.16%
WBC B	79	15.16%
HHP	58	11.13%
WBC A	39	7.49%
SCR	24	4.61%
GEN	16	3.07%
CLF	1	0.19%
DWS	1	0.19%
Total:	521	100%

Pollutants on 2020 List		
Pollutant	# of Listings	%
Escherichia coli	142	27.26%
Chlorophyll-a	98	18.81%
Oxygen, Dissolved	71	13.63%
Mercury in Fish Tissue	63	12.09%
Zinc	29	5.57%
Chloride	20	3.84%
Cadmium	26	4.99%
Lead	20	3.84%
Aquatic Macroinvertebrate Bioassessments	12	2.30%
Nitrogen, Total	8	1.54%
Phosphorus, Total	8	1.54%
Ammonia, Total	4	0.77%
Sedimentation/Siltation	3	0.58%
Temperature, water	3	0.58%
Total Dissolved Solids	3	0.58%
Copper	2	0.38%
Fishes Bioassessments	2	0.38%
Nutrient/Eutrophication Biol. Indicators	2	0.38%
pH	2	0.38%
Atrazine	1	0.19%
Nickel	1	0.19%
Polycyclic Aromatic Hydrocarbons-PAHs	1	0.19%
<b>Total:</b>	<b>521</b>	<b>100%</b>

Sources on 2020 List		
Sources	# of Listings	%
Nonpoint Source	196	36.36%
Source Unknown	91	16.88%
Atmospheric Deposition - Mercury	63	11.69%
Urban Runoff/Storm Sewers	67	12.43%
Point Source	43	7.98%
Mining Related	70	12.99%
Road/Bridge Runoff, Non-construction	2	0.37%
Rural, Residential Areas	2	0.37%
Channelization	1	0.19%
Dam or Impoundment	1	0.19%
Habitat Mod. - other than Hydromod.	1	0.19%
Impacts, Flow Regulation/modification	1	0.19%
Municipal, Urbanized High Density Area	1	0.19%

Appendix D

# McCoy Creek Nonpoint Source Success Story



# NONPOINT SOURCE SUCCESS STORY

## Missouri

### Planning and Partnerships Improve Water Quality in McCoy Creek

#### Waterbody Improved

As a result of impacts from urban and agricultural runoff, McCoy Creek was listed on Missouri's Clean Water Act (CWA) section 303(d) list of impaired waters for low dissolved oxygen (DO) in 2012. To address the impairment and concerns about future urban growth, partners completed a nine-element watershed-based plan (WBP) for the Dry Branch Creek watershed (a subwatershed of McCoy Creek) and implemented green infrastructure projects. Best management practices (BMPs) were also applied in agricultural areas within the watershed. Water quality data collected in 2016 showed that all DO concentrations met the state's water quality standard (WQS), resulting in a segment of McCoy Creek being removed from the CWA section 303(d) in 2018.

#### Problem

McCoy Creek, in northwestern St. Charles County, is a tributary of the Cuivre River. The upper reaches of McCoy Creek drain the unincorporated rural and agricultural areas of St. Charles County, while the middle and lower reaches drain portions of the cities of Flint Hill (to the north) and Wentzville (to the south). The three main tributaries of McCoy Creek receive runoff from agricultural and forested areas, as well as the urbanized areas of Wentzville, Interstate 70, and State Highway 40/61 (Figure 1).

In 2012, a 1.9-mile segment of McCoy Creek (WBID 0214) was listed on Missouri's CWA section 303(d) list of impaired waters for low DO due to unknown reasons. As the population of Wentzville grew from 6,896 in 2000 to 29,070 in 2010, a greater percentage of the rural landscape changed to urban to accommodate the growing numbers. The percentage of impervious surfaces, stream flow and its erosive power, and the amount of nonpoint source (NPS) pollution transported into the surrounding waterways increased. Increases in stream temperatures, excessive algal growth, and sediment loads commonly contribute to low DO and negatively impact aquatic life.

#### Story Highlights

The City of Wentzville completed a nine-element WBP for the Dry Branch Creek watershed (a subwatershed of McCoy Creek) in 2013 and implemented a variety of retrofit enhancements between 2011 and 2015. The

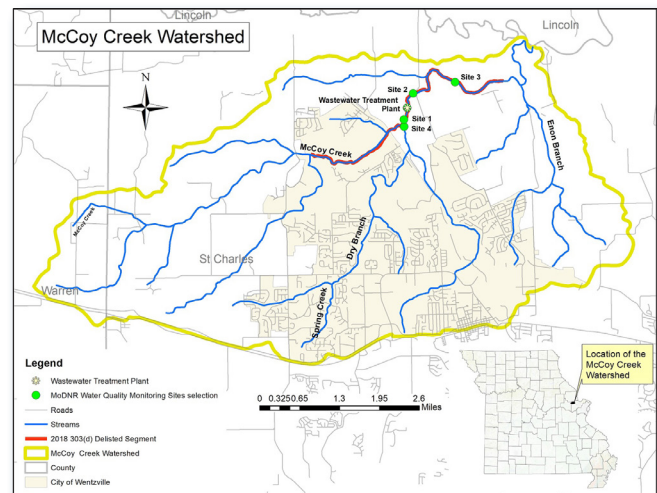


Figure 1. McCoy Creek is in eastern Missouri.

St. Charles Soil and Water Conservation District (SWCD) provided cost-share dollars to implement cover crops on 107 acres of agricultural area within the McCoy Creek watershed to reduce soil erosion, increase water infiltration, and improve water quality and soil health. Retrofits were completed at existing urban retention basins on commercial properties and in residential subdivisions in partnership with property owners. A number of green infrastructure BMPs were constructed in the McCoy Creek watershed. A car wash detention basin was expanded and reconfigured as a rain garden to filter stormwater runoff. Rain gardens and native shoreline plantings were added to a subdivision's common ground area to pretreat high-temperature runoff from 20 acres (Figure 2). A series of green infrastructure pilot projects





Figure 2. Native plants were planted along the shoreline of a basin in the Huntsdale Subdivision.

(e.g., vegetated bioswales, pervious pavements, riparian areas, and native plantings) were implemented at a city park. A forebay was constructed at the inlet of a regional detention lake to capture and trap sediment and nutrients from a 472-acre drainage area. Partners also installed parking lot bioswales; athletic field biofilters/rain gardens; three different types of pervious pavements; wetlands; riparian areas; and over 2,500 trees, shrubs and native plants. Additionally, educational shelters and interpretive signage were constructed throughout the park and along an educational trail system.

## Results

In 2012, 15 water quality monitoring events occurred on McCoy Creek at three locations twice a day during the early morning and late afternoon hours. The sites were located on McCoy Creek, downstream of the

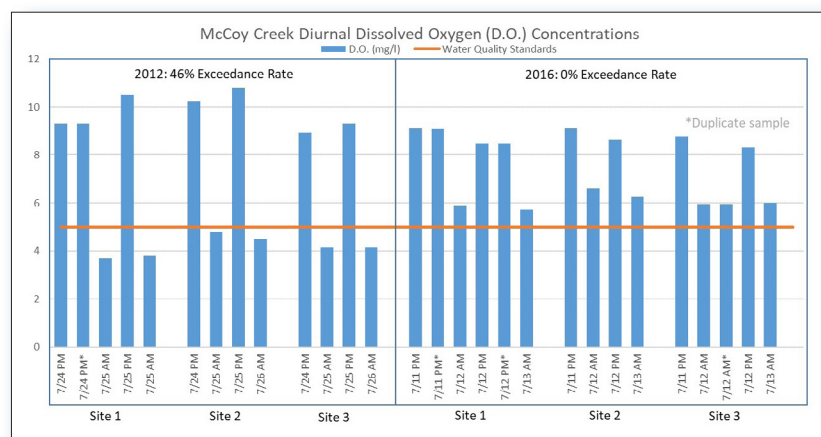


Figure 3. A comparison of the 2012 and 2016 dissolved oxygen exceedance rates in the morning (AM) and late afternoon (PM) at three instream monitoring sites show improvement.

confluence of Dry Branch Creek to bracket inputs related to NPS pollution and the wastewater treatment plant (WWTP). Low DO levels were noted both above the WWTP (site 1, NPS inputs) and below the WWTP (sites 2 and 3, WWTP input): a total of 46 percent of the DO levels exceeded the state WQS. The sampling event was repeated in 2016. The results showed improved conditions.

The water quality improvements upstream of the WWTP (site 1) can be attributed to the implementation of on-the-ground practices to address NPS runoff through the 319 NPS project efforts, the City of Wentzville's Clear Stormwater and Green Parks initiative and community outreach efforts, implementation of a countywide stream buffer ordinance, and cost-share practices implemented through the St. Charles SWCD. Water quality improvements at site 2 and 3 can be contributed to upgrades occurring at the WWTP. From the 2016 sampling event, all the DO data met or exceeded state water quality criteria (Figure 3).

## Partners and Funding

Partners involved in the project included the City of Wentzville; the Wentzville Stormwater Advisory Committee; St. Charles SWCD; Wentzville School District; Oasis Kwik Car Wash; Huntsdale Subdivision Homeowner's Association; SCI Engineering, Inc.; Water Resources Solutions; Shockey Consulting; Teklab, Inc.; Landesign, LLC; Bernardin, Lochmueller & Associates; Demien Construction; Greenway Network, Inc.; the

City of Flint Hill; St. Charles County; and the Missouri Department of Natural Resources. The total cost of the Dry Branch Watershed Clean Stormwater and Green Parks Section 319 NPS Grant Project and partner contributions was \$1,248,015 for the completion of a nine-element WBP, water quality monitoring, demonstration infiltration projects at four sites, and a citywide educational outreach campaign and stream-naming contest. Since 2012, the St. Charles SWCD provided \$3,424 in state cost-share dollars to implement cover crops on 107 acres within the McCoy Creek watershed.



U.S. Environmental Protection Agency  
Office of Water  
Washington, DC

EPA 841-F-19-001WW  
December 2019

## For additional information contact:

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573-526-4662 • [trish.rielly@dnr.mo.gov](mailto:trish.rielly@dnr.mo.gov)

Appendix E

# Illicit Discharge Tracking

Outfall Reconnaissance Field Inventory / Sample Collection Form  
Illicit Discharge Incident Tracking Report  
Wentzville Illicit Discharge Monitoring Sampling Guide

# OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

## Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours:	Last 48 hours:	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply): <input type="checkbox"/> Industrial <input type="checkbox"/> Open Space <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Suburban Residential Other: _____ <input type="checkbox"/> Commercial Known Industries: _____			
Notes (e.g., origin of outfall, if known):			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)				
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>				
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial				

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	_____ ' _____"	Ft, In	Tape measure
	Measured length	_____ ' _____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip
Conductivity				Probe

## Outfall Reconnaissance Inventory Field Sheet

### Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No (If No, Skip to Section 5)

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Faint	<input type="checkbox"/> 2 – Easily detected	<input type="checkbox"/> 3 – Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Faint colors in sample bottle	<input type="checkbox"/> 2 – Clearly visible in sample bottle	<input type="checkbox"/> 3 – Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 – Slight cloudiness	<input type="checkbox"/> 2 – Cloudy	<input type="checkbox"/> 3 – Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Few/slight; origin not obvious	<input type="checkbox"/> 2 – Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 – Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

### Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

### Section 6: Overall Outfall Characterization

☐ Unlikely
 ☐ Potential (presence of two or more indicators)
 ☐ Suspect (one or more indicators with a severity of 3)
 ☐ Obvious

### Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, type:	<input type="checkbox"/> OBM	<input type="checkbox"/> Caulk dam

### Section 8: Stream Channel Assessment ☐ Unstable ☐ Stable

**Instability Notes** (i.e. scour, incising, lateral migration, slope failure, etc.):

### Section 9: Observed Stream Impacts: ☐ Vegetation ☐ Fish ☐ Wildlife

**Impact Length of Stream (ft.):**

**Impact Notes:**

### Section 10: Any Non-Illicit Discharge Concerns (e.g. trash, infrastructure repair)? ☐ Yes ☐ No

### Section 11: Are storm drain markers installed in this area effective? ☐ Yes ☐ No If No, please specify locations that could benefit from markings.

## Wentzville Stormwater Management Illicit Discharge Incident Tracking Report

**Incident ID:**

**Responder Information**

Call taken by:

Call date:

Call time:

Precipitation (inches) in past 24-48 hrs:

**Reporter Information**

Incident time:

Incident date:

Caller contact information (*optional*):

**Incident Location** (*complete one or more below*)

Latitude and longitude:

Closest street address:

Receiving stream or outfall #:

Nearby landmark:

**Primary Location Description**

**Secondary Location Description:**

☐ Stream corridor  
(*In or adjacent to stream*)

☐ Outfall

☐ In-stream flow

☐ Along banks

☐ Upland area  
(*Land not adjacent to stream*)

☐ Near storm drain

☐ Near other water source (storm water pond, wetland, etc.):

Narrative description of location:

**Upland Problem Indicator Description**

☐ Dumping

☐ Oil/solvents/chemicals

☐ Sewage

☐ Wash water, suds, etc.

☐ Other: \_\_\_\_\_

**Stream Corridor Problem Indicator Description**

Odor

☐ None

☐ Sewage

☐ Rancid/Sour

☐ Petroleum (gas)

☐ Sulfide (rotten eggs);  
natural gas

☐ Other: Describe in "Narrative" section

Appearance

☐ "Normal"

☐ Oil sheen

☐ Cloudy

☐ Suds

☐ Other: Describe in "Narrative" section

Floatables

☐ None

☐ Sewage (toilet paper, etc)

☐ Algae

☐ Dead fish

☐ Other (Describe in "Narrative" section)

Narrative description of problem indicators:

Suspected Violator (name, personal or vehicle description, license plate #, etc.):

Investigation Notes	
Initial investigation date:	Investigators:
<input type="checkbox"/> No investigation made	Reason:
<input type="checkbox"/> Referred to different department or agency	Department/Agency Contact:
<input type="checkbox"/> Investigated: No action necessary	
<input type="checkbox"/> Investigated: Requires action	Description of actions:
<input type="checkbox"/> Illicit Discharge Found	Date Illicit Discharge Eliminated:
Hours between call & investigation:	Enforcement Action Taken:
<input type="checkbox"/> Storm drain markers are installed/effective in the area. <input type="checkbox"/> Storm drain markers could be beneficial to prevent future illicit discharges in these locations:	
Date case closed:	
Notes:	



## Wentzville Illicit Discharge Monitoring Sampling Guide (Water Chemistry Parameters)

Parameter & Method	Sources	Container	Sample Volume	Preservative	Hold Time	Analysis Options	Normal Range	Lab Cost (estimate)
<b>FIELD ANALYSIS</b>								
<b>Conductivity</b>	Sewage, runoff, road salt, Inorganic dissolved solids (Cl, ammonia, sulfate, phosphate, Fe, Ca, Al, etc.)	Calibrated Meter (500 mL plastic lab)	100 mL	Immediate in flow	28 days <6° C	Field	250-600 µs	
<b>pH*</b>	Washwater, industrial	Meter, calibrated	50 mL	Immediate in flow	None	Field & WWTP	6 – 9	
<b>Temperature*</b>	Washwater	Thermometer	100 mL	Immediate in flow	Immediate in flow	Field	< 90° F or 32° C	
<b>Detergents/Surfactants</b> SM 5540 C	Sewage/washwater	Chemets Detergents Test	250 mL	Immediate in flow	48 hours <6° C	Field & outsource	<0.25 mg/L see flowchart (WW is 1-20 mg/L)	
<b>LAB ANALYSIS (Sample pickup in cooler with ice, \$20)</b>								
<b>Detergents/Surfactants</b> SM 5540 C	Sewage /washwater	1 L plastic	250 mL	<6° C	48 hours	Field & outsource	<0.25 mg/L see flowchart (WW is 1-20 mg/L)	\$50
<b>E. coli*</b> (preferred bacteria test) SM 9223B	Sewage, pet/animal waste	Whirl bag or 125 mL plastic	100 mL	0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 4° C	6 hours	WWTP Idexx, outsource	<126 cfu/100 mL WBC-A WBC-A <1,134 SCR	\$25
<b>Fecal coliform</b> SM 9222D	Sewage, pet/animal waste	Whirl bag or 125 mL plastic	100 mL	0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 4° C	6 hours	WWTP, outsource	<126 cfu/100 mL WBC-A WBC-A <1,134 SCR	\$25
<b>Fluoride</b> SM 4500F-B SM 4500-F C (TOTAL)	Potable/washwater	500 mL plastic	100 mL	None	28 days	Outsource,	<0.25 mg/L (>0.25 is tapwater, if no detergents)	\$20
<b>Nitrogen as Ammonia, NH<sub>3</sub>*</b> SM 4500NH3-F	Industrial, municipal, ag wastewater, sanitary	500 mL plastic	100 mL	H <sub>2</sub> SO <sub>4</sub> , <6° C	28 days	WWTP	Ammonia/Potassium Ratio >1 = sanitary Ammonia/Potassium Ratio <1 = washwater	\$25
<b>Potassium &amp; Metals by ICP*</b> EPA 200.7 or SM 3500-K	Excellent for Industrial discharges [high]; Vehicle exhaust/tires, downspouts [low]	500 mL plastic	100 mL	HNO <sub>3</sub>	6 months	Outsource	<20 mg/L	\$13

\*Subject to MO Water Quality Standards (10 CSR 20-7)

**Any samples with less than 48 hours of hold time, should arrive at the lab before Friday to avoid weekend surcharge.**  
**BOD should be received T/W/Th, or before noon Friday. Coliform needs to be received before Thursday.**





## Wentzville Illicit Discharge Monitoring Sampling Guide (Water Chemistry Parameters)

### Current WWTP Lab

Dave Jolley  
(636) 639-2072  
[David.Jolley@wentzvillemo.gov](mailto:David.Jolley@wentzvillemo.gov)

Ryan Peasel  
(636) 639-7541 Cell: (314) 290-6963  
[Ryan.Peasel@wentzvillemo.gov](mailto:Ryan.Peasel@wentzvillemo.gov)

### Current Lab Contract:

Teklab, Inc.  
Emily Hayer  
(618) 344-1004 ext. 44  
[ehayer@teklabinc.com](mailto:ehayer@teklabinc.com)

### Sampling Equipment

- Camera
- Measuring Tape (pipe diameter)
- Cooler with ice pack
- Thermometer
- Clipboard/Map/Data sheets
- Labels or Labeling Tape (sample bottle)
- Permanent marker (for sample labels)
- 1 L plastic (PE) sample bottle
- 1 L plastic (PE) bottle w/ preservative
- Nitrile gloves
- 3 Whirl bags for bacteria sampling
- A "dipper" sampling cup on a pole (if needed for hard to reach areas)

### Labeling

- Date & Time
- Collection Site
- Collector's initials
- Photo # (if taken)

**Table 39: Indicator Parameters Used to Detect Illicit Discharges**

Parameter	Discharge Types It Can Detect				Laboratory/Analytical Challenges
	Sewage	Washwater	Tap Water	Industrial or Commercial Liquid Wastes	
Ammonia	●	⊙	○	⊙	Can change into other nitrogen forms as the flow travels to the outfall
Boron	⊙	⊙	○	N/A	
Chlorine	○	○	○	⊙	High chlorine demand in natural waters limits utility to flows with very high chlorine concentrations
Color	⊙	⊙	○	⊙	
Conductivity	⊙	⊙	○	⊙	Ineffective in saline waters
Detergents – Surfactants	●	●	○	⊙	Reagent is a hazardous waste
<i>E. coli</i> Enterococci Total Coliform	⊙	○	○	○	24-hour wait for results Need to modify standard monitoring protocols to measure high bacteria concentrations
Fluoride*	○	○	●	⊙	Reagent is a hazardous waste Exception for communities that do not fluoridate their tap water
Hardness	⊙	⊙	⊙	⊙	
pH	○	⊙	○	⊙	
Potassium	⊙	○	○	●	May need to use two separate analytical techniques, depending on the concentration
Turbidity	⊙	⊙	○	⊙	

● Can almost always (>80% of samples) distinguish this discharge from clean flow types (e.g., tap water or natural water). For tap water, can distinguish from natural water.

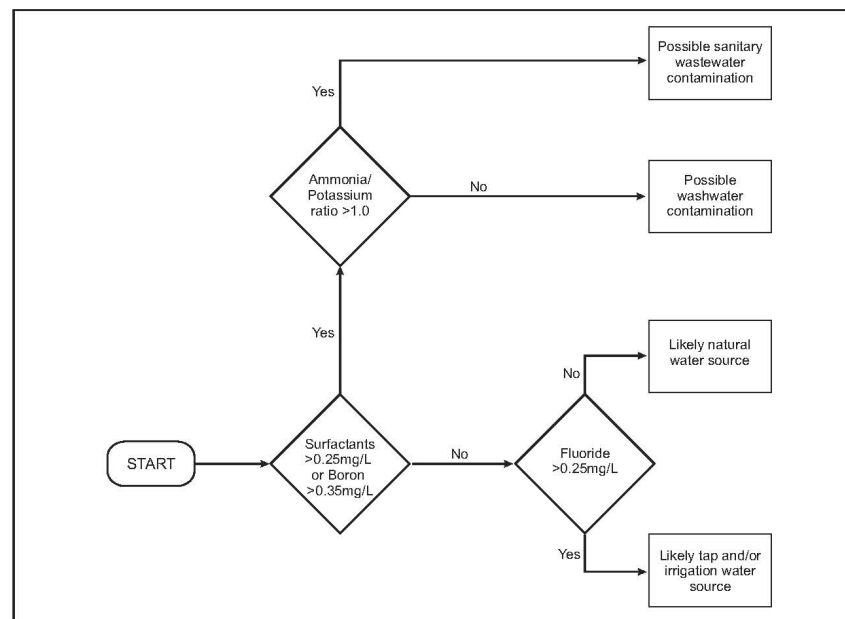
⊙ Can sometimes (>50% of samples) distinguish this discharge from clean flow types depending on regional characteristics, or can be helpful in combination with another parameter

○ Poor indicator. Cannot reliably detect illicit discharges, or cannot detect tap water

N/A: Data are not available to assess the utility of this parameter for this purpose.

Data sources: Pitt (this study)

\*Fluoride is a poor indicator when used as a single parameter, but when combined with additional parameters (such as detergents, ammonia and potassium), it can almost always distinguish between sewage and washwater.



**Figure 47: Flow Chart to Identify Illicit Discharges in Residential Watersheds**

# Ordinances, Policies & Procedures

Municipal Codes - Quick Reference  
City Standards & Planning Tools - Quick Reference  
Construction Site SWPPP Inspection Form (for staff)  
SWPPP Inspection Report (for contractors)  
Operations & Maintenance Program Manual

## Municipal Codes - Quick Reference

Wentzville Municipal Codes listed below are available by searching this link on the City's website:

[www.wentzvillemo.gov/government/municipal\\_code/index.php](http://www.wentzvillemo.gov/government/municipal_code/index.php)

MCMs	Code Section	Code Title
3, 4, 5	215	Nuisances
3, 4, 5	240	Garbage and Rubbish
3, 4, 5	410	Article VI. Protection of Natural Watercourses
4, 5	410.260	Tree Preservation Requirements
4, 5	505.200	Engineering Design Criteria (EDC) and City Standard Specifications and Construction Details (SSCD)
3, 4, 5	510	Streets, Sidewalks and other Public Places
3, 4, 5	515	Erosion and Sediment Control
3	720	Wastewater Pretreatment – Article I
3, 4, 5	725	Stormwater Pollution Control

## City Standards & Planning Tools - Quick Reference

The following links provide further information on City standards and planning tools:

Engineering Design Criteria (EDC) and City Standard Specifications and Construction Details (SSCD)

[www.wentzvillemo.gov/departments/public\\_works/construction\\_and\\_development.php](http://www.wentzvillemo.gov/departments/public_works/construction_and_development.php)

Comprehensive Plan [www.wentzvillemo.gov/departments/community\\_development/planning\\_and\\_zoning](http://www.wentzvillemo.gov/departments/community_development/planning_and_zoning)

Project: \_\_\_\_\_

Date: \_\_\_\_\_

Inspector: \_\_\_\_\_

☐ Routine Inspection ☐ Post-Rain ( \_\_\_\_\_ " past 24 hrs.)  
☐ Re-inspection ☐ Concern (Incident # \_\_\_\_\_)

General Information					
Weather:	<input type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Rain	<input type="checkbox"/> Snow/Ice	<input type="checkbox"/> Other _____
Site size:	<input type="checkbox"/> <1 acre	<input type="checkbox"/> 1-20 acres	<input type="checkbox"/> 21-50 acres	<input type="checkbox"/> >50 acres	
Site type:	<input type="checkbox"/> Residential	<input type="checkbox"/> Commercial	<input type="checkbox"/> Industrial	<input type="checkbox"/> Utility	<input type="checkbox"/> Transportation
Phase:	<input type="checkbox"/> Pre-construction	<input type="checkbox"/> Rough Grading	<input type="checkbox"/> Paving	<input type="checkbox"/> Building Construction / Final Stabilization	
	<input type="checkbox"/> Clearing/Grubbing	<input type="checkbox"/> Utility Construction	<input type="checkbox"/> Finish Grading		

Site Observations	Yes <i>Acceptable</i>	No <i>Deficient</i>	N/A	Corrective Action # / Notes <i>See Remarks</i>
City Grading/NPDES Land Disturbance Permits, as required	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Contractor SWPPP Inspections Regularly Submitted	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
SWPPP BMPs Match Approved/Updated Plan	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Grading Status <input type="checkbox"/> Active/Scheduled <input type="checkbox"/> Partially Inactive <input type="checkbox"/> Inactive	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Site Stabilization of Inactive Areas (where grading ceases >30 days): <input type="checkbox"/> Temporary Vegetation Established <input type="checkbox"/> Stabilization Required <input type="checkbox"/> Permanent Vegetation Established <input type="checkbox"/> Final Stabilization Achieved	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Site Outfalls / Discharge Points (Streams & properties protected from erosion/sediment)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	

Best Management Practices (BMPs)				
Construction Exit / Streets Clean (if in-service)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Storm Drain Inlet Protection (if in-service)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Silt Fence / Wattles	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Slopes / Stockpiles Stabilized	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Swales / Ditch Checks / Rip-Rap	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Construction Waste, Litter, Dumpsters are Controlled	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Concrete Washout Areas (no runoff into inlets/waterways)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Portable Toilets	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Equipment Maintenance/ Fueling Areas (no spills/leaks)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Potential Contaminants Stored Inside or Covered (fuel/chemicals)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Basins / Sediment Traps (<50% full)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Basin Outfall Protection	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Dewatering Controls (no increased turbidity or deposits in streams)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Filter Strips	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Stream Buffers / Mitigation Areas / Tree Preservation Undisturbed	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Temporary BMPs Removed if No Longer Needed	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	

## Inspection Summary & Follow-Up

**Site Inspection:** ☐ Pass ☐ Fail

**Photos Taken:** ☐ Yes ☐ No

**Future Inspection Priority:**

*(Based on size of development, slope, proximity/threat to surface waters, history of non-compliance, etc.)*

☐ Low ☐ Moderate ☐ High

**Compliance Assistance:**

*(minor deficiencies exist)*

☐ Verbal/E-mail Notice Date: \_\_\_\_\_ Date to comply: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone/Email: \_\_\_\_\_

**Enforcement Action:**

*(major deficiencies or violations exist)*

☐ Correction Notice Date: \_\_\_\_\_ Date to comply: \_\_\_\_\_

☐ Notice of Violation Letter Date: \_\_\_\_\_ Date to comply: \_\_\_\_\_

☐ Citation Issued Date: \_\_\_\_\_ Court Date: \_\_\_\_\_ Fine: \_\_\_\_\_

☐ Stop Work Order Issued Date: \_\_\_\_\_

☐ Escrow Seized Date: \_\_\_\_\_ Amount: \_\_\_\_\_

Contact: \_\_\_\_\_ E-mail/ Address: \_\_\_\_\_

**Remarks** *(i.e. SWPPP modifications, BMP issues, corrective actions taken, reasons for delay, etc.)*

*Attach pages/photos as needed.*

**Inspector's Signature:** \_\_\_\_\_

*This template can be used to report NPDES SWPPP inspections. The template should be modified based on the site's permit and BMPs.  
NPDES reports may be submitted weekly and after 3.1" rainfall/day, or biweekly and after 0.25" rain.  
Send reports to your Engineering inspector and cc: [jamie.paige@wentzvillemo.gov](mailto:jamie.paige@wentzvillemo.gov).*

Project: \_\_\_\_\_ Contractor: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Address: \_\_\_\_\_ NPDES Permit #: \_\_\_\_\_  
☐ Weekly Inspection  
☐ Biweekly Inspection  
☐ Post-Rain ( \_\_\_\_")

Site Observations	Yes <small>Acceptable</small>	No <small>Deficient</small>	N/A	Corrective Action / Notes
SWPPP site map and records updated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SWPPP implemented and effective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Action items from last report have been addressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grading operations have stopped: <input type="checkbox"/> temporarily <input type="checkbox"/> permanently	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Best Management Practices (BMPs)				
Construction Exits / Streets Clean	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Silt Fence / Wattles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ditch Checks / Rip Rap	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Inlet Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Washout Areas <i>(no runoff into inlets/waterways)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Slopes/Disturbed Areas Inactive >14 days Are Stabilized: <input type="checkbox"/> Seed/Mulch <input type="checkbox"/> Blanket <input type="checkbox"/> Hydroseed <input type="checkbox"/> Landscaped/Sod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Stockpiles Stabilized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Construction Waste Controlled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Materials Stored Inside / Covered / Protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Equipment Maintenance / Fueling Areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Portable Toilets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basins / Sediment Traps <i>(&lt;50% full)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dewatering Operations <i>(no increased turbidity or deposits in streams)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Outfalls / Discharge Points	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Filter Strips <i>(&gt;25' undisturbed buffer for surface waters)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Comments** (i.e. areas where disturbance begins/ends; SWPPP modifications and or actions taken; reasons for delay, etc.)

Attach pages/photos as needed.

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Inspector: \_\_\_\_\_

Qualifications/Title: \_\_\_\_\_

Inspector's Signature: \_\_\_\_\_

Phone/E-mail: \_\_\_\_\_



**Operations & Maintenance Program**  
**Stormwater Pollution Prevention & Good Housekeeping**  
**For Municipal Operations**



Administered by the  
City of Wentzville  
Stormwater Management Program

**Revised January 2019**



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# INTRODUCTION

## Purpose - Taking Good Care

The O&M Program establishes standard stormwater pollution procedures for the maintenance of buildings, facilities, and infrastructure owned and operated by the City of Wentzville.

This guidance is designed to assist city departments in meeting requirements of the NPDES Permit MO-R040054 for Municipal Separate Storm Sewer Systems (MS4). This permit is regulated by the Missouri Department of Natural Resources under state and federal clean water laws to reduce pollutants in stormwater runoff to the maximum extent practicable.

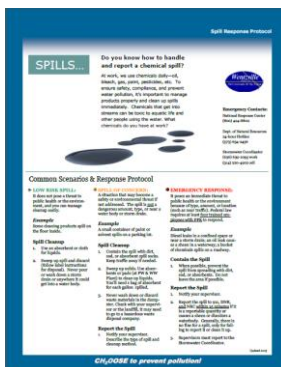
Wentzville's Stormwater Management Plan strives to prevent pollutants (i.e. trash, mud, chemicals, yard waste and animal waste) from being carried by stormwater runoff into local water bodies.

The City of Wentzville is permitted under the following state/federal operating permits:

- ◆ Water Division DNR Permit #6010849 to Dispense Water to the Public, granted June 25, 1980
- ◆ Water Reclamation Center (WRC) NPDES Permit #MO-0093599

## Departmental Responsibilities

Departments included in this SWPPP have oversight for implementation of the best management practices (BMPs), inspections, and training for good housekeeping and pollution prevention. All O&M activities should be reported annually to the Stormwater Division. Assistance and staff training are available to departments upon request. Spill Response Protocol flyers and training DVDs can also be provided.



**Note:** This manual serves as a guide and may not be inclusive of all materials and operations. Solid waste generated at facilities is not included in this manual; collection and disposal is managed through the City's Solid Waste and Recycling contractor. It is each department's responsibility to provide updates to this O&M Program guide and establish procedures and policies as deemed appropriate for materials or operations that could impact the Municipal Separate Storm Sewer Systems (MS4) if not already covered herein and report this to the Stormwater Division annually at a minimum.

## Standard Operating Procedures for: City Building Services



Locations:	<b>City Hall</b> (former location) 310 W. Pearce Blvd. – 0.4 acres – 1 stormwater outfall <b>Law Enforcement Center</b> (indoors) 1019 Schroeder Creek Blvd. – 5.6 acres <b>Public Works</b> (indoors) 200 E. 4 <sup>th</sup> Street – 3.38 acres – 3 stormwater structures
Responsible Parties:	Supervisor Facility Operations (Rob Clemens)

### Training procedures

All applicable employees should be trained in general stormwater pollution prevention and facility Best Management Practices (BMPs) annually at a minimum. This includes how to recognize, respond to and report improper discharges or connections to the storm system or waterways.

### Record Keeping and Documentation

- A list of all employees trained is kept in the facility's Stormwater Pollution Prevention Binder.
- Copies of all contracts for building services or other maintenance should be kept.

### Potential Materials That Impact Stormwater Runoff or Surface Waters

Material	Maximum quantity kept on hand	For use within (time)	Storage location
Various Cleaning Supplies	10 gallons	Six Months	Custodial Closets
Paint	30 gallons	12 months	OSHA approved cabinets in Public Works Warehouse
Paint Thinners	2 gallons	12 months	OSHA approved cabinets in Public Works Warehouse

Waste	Max Storage Capacity	Storage Location	Method of disposal	Contractor	Disposal Frequency
Paint	100 gallons	Public Works Warehouse	Clay dryer mixed into paints and then disposed of	N/A	170 days
Paint (Punctured Spray Cans)	55 gallons	Water Shop	Hazardous Waste Recycling	Public Works	When Needed

## Best Management Practices

### Operations

- Inspect building facilities once per year.
- Maintain SDS sheets for cleaning supplies in Public Works Building and post Spill Response Protocol flyer in break room or other visible area.
- Use a ground cloth or oversized buckets for paint mixing and tool cleaning.
- Use tarps or other means for painting to minimize wind drift and contain spills and overspray.
- Evaluate road salt application rates and alternatives (i.e. brine) to reduce salt runoff in storm drains and waterways.
- Implement the use of salt brine in parking lots for deicing pre-treatment to reduce salt use.
- Annually track application rates, reductions and/or methods used to reduce salt applications.

### Waste Management

- Waste receptacles have adequate covers or lids to prevent blowing.
- Grey water is not allowed to enter storm drains. It can drain to nearby landscaped areas or allowed to pool onsite and evaporate.
- Dispose of wastewater in mop sink or other sanitary sewer drain. Never dump cleaning water onto parking lots or storm drains.

#### *Stormwater Protection and Spill Response Materials*

- *Spill kit and equipment for a dry clean up (socks, absorbent pads, kitty litter, broom, and dustpan)*
- *Containers for collecting cleanup waste*
- *Tarps or ground cloths*

### Landscaping and Lawn Care

- Remove and dispose litter and outdoor waste regularly.
- Mow at higher setting and reduce bagging where possible. Leave clippings on the lawn or mulch grass to retain moisture.
- Minimize the use of landscaping chemicals.
- Apply fertilizer and pesticides according to the label.
- Select slow release fertilizers (e.g. methylene urea, IDBU or resin coated fertilizer). Apply fertilizer in cool weather, preferably fall.
- Store chemicals in their original containers and properly to avoid spills, leaks and product deterioration. Ideally this is in a cool, well-ventilated building with a concrete floor.

### Spill Prevention & Response

- All chemicals and paints are stored under roof.
- Check storage and buildings weekly for leaks and spills.
- Spills and leaks are cleaned with the chemical spill kits.
- Do not transfer or dispose of any material outdoors or near a storm drain.

- Outdoor spills or leaks of paint, cleaners or chemicals are cleaned or repaired promptly.
- Emergency phone numbers are clearly posted in the break room or maintenance shop.

### **Inspection procedures**

The inspection checklist in Appendix A should be completed and return to the Stormwater Coordinator by December 31<sup>st</sup> each year.

## Standard Operating Procedures for: **Parks and Recreation**



Locations:	Heartland Park 100 W. Dierberg Dr. – 49.5 acres Memorial Park 1419 Kathleen Dr. – 4.22 acres Peruque Valley Park 1335 S. Point Prairie Rd. – 67.52 acres Progress Park 869 Meyer Rd. - 19.13 acres Rotary Park 2589 W. Meyer Rd. – 71.24 acres Splash Station 1141 Peine Rd. – 15 acres
Responsible Parties:	Superintendent Park Maintenance (Billy Roll) Horticulturist (Susan Maag) Facility Manager Supervisor (Mike Barker)

### **Training procedures**

All applicable employees should be trained in general stormwater pollution prevention and facility Best Management Practices (BMPs) annually at a minimum. This includes how to recognize, respond to and report improper discharges to the storm system or waterways.

### **Facility/Pool Management**

All pool drains are connected to the sanitary system (Progress Park was connected in the early 2000s). Staff dechlorinates the pool water before closing the pool and pumping to sanitary. The Progress Park pool has a 10" line that drains to a silo pit pump station and then to the treatment plant. The remaining 4" green PVC pipes that discharge in the creek are old lines that were converted, or are simply yard drains.

### **Record Keeping and Documentation**

- A list of all employees trained is maintained by the Responsible Party.
- Copies of all current contracts for building services or facility maintenance should be kept on file.

### **Potential Materials That Impact Stormwater Runoff or Surface Waters**

Nutrients from fertilizer (nitrogen and phosphorus) can cause excessive aquatic plant/algae growth which can deplete oxygen in waterways.



Material	Maximum quantity kept on hand	For use within (time)	Storage location		
Various Cleaning Supplies	20 gallons	6 months	Under roof		
Paint	75 gallons	6 months	Under roof		
Chlorine tanks	2 x 1000 gallons	6 months	Under roof		
Herbicide	20 gallons	6 months	Under roof		
Mulch	75 yards	6 months	Outside		
Salt Storage	40 bags/pallet	1 year	Under roof		
Fertilizer	40 bags/pallet	6 months	Under roof		
Various soil amendment products (Aluminum Sulfate, bone meal, mycorrhizae, lime, etc.)	50	2 years	Under roof		
Waste	Max Amount/ Capacity	Storage Location	Method of disposal	Contractor	Disposal Frequency
Wood or Brush	50 yards	Reused	Chipper	Parks	2 times/year
Leaves, Grass	10 yards	Reused	Chipper	Parks	2 times/year
Swimming Pool Backwash Water	10000 gallons	Pit underground	Pumped to Sanitary	Parks	Once/week

## Best Management Practices

### Operations

- Inspect facilities annually at a minimum.
- Maintain SDS sheets in Parks Maintenance Building and post Spill Response Protocol flyer in break room or other visible area.
- Construction or maintenance activities that excavate in or discharge dredge or fill material into "Waters of the United States," (i.e. ditches, creeks, rivers, lakes, ponds and wetlands) may require a Corps of Engineers 404 permit and a MDNR 401 water quality certification. Examples include placing culverts in creeks, constructing outfalls, and stream restoration.
- Evaluate road salt application rates and alternatives (i.e. brine) to reduce salt runoff in storm drains and waterways.
- Implement the use of salt brine in parking lots for deicing pre-treatment to reduce salt use.
- Annually track application rates, reductions and/or methods used to reduce salt applications.

## Waste Management

- Remove and dispose litter and waste regularly.
- Waste receptacles have adequate covers or lids to prevent blowing.
- Compost or properly dispose yard waste. Do not dump yard waste in or near creeks.
- Dispose of pesticide waste properly, following label instructions.

## Pool Management

- Dechlorinate water before closing the pool and pumping pool water to sanitary.
- Store all pool chemicals underroof or inside.

## Vehicle/Equipment Maintenance

- Preventive maintenance program minimizes fluid leaks and equipment failures. Vehicles and equipment are inspected routinely and repaired as needed.
- In off-season store lawn equipment underroof, on grass/rock or in an area with a grass filter strip.
- All equipment maintenance and repairs are performed at a designated area under cover to limit exposure to rain when possible.
- On occasion and when necessary, outside maintenance work is performed on a paved surface with provisions made to contain and cleanup all drips and spills.
- Vehicle operators use commercial fueling stations whenever possible.
- When fueling equipment, staff should be instructed to remain with the equipment during fueling and to not top-off the fuel tank to avoid overflows and spills.
- Wash vehicles or equipment at the Public Works Wash Bay when feasible or use an adequate filtersox for mud/hydrocarbons near storm drains.

## Landscaping and Lawn Care

- Minimize mowing open space areas, depending on site objectives.
- Mow at higher setting and reduce bagging where possible. Leave clippings on the lawn or mulch grass to retain moisture.
- Remove exotic or invasive vegetation where feasible. Replace with native plantings as resources are available.
- Minimize the use of landscaping chemicals.
- Perform soil tests as needed to determine optimum fertilizer application rates.
- Avoid fertilizer and pesticides application before rain.
- Apply fertilizer and pesticides according to the label.
- Select slow release fertilizers (e.g. methylene urea, IDBU or resin coated fertilizer). Apply fertilizer in cool weather, preferably fall.
- When disturbing land, clearing vegetation or impacting the root zone, employ erosion and sediment control. Refer to the project SWPPP or DNR Protecting Water Quality Field Manual for resources.
- Use natural biological pest controls when feasible.

- Apply pesticides when the target pest is at its most vulnerable life stage using spot applications rather than widespread spraying.
- When pesticide or herbicide is required, select product carefully. It should be suited for the application location (i.e. if near a waterbody). Avoid highly water-soluble and very environmentally-stable products to minimize potential for leaching from soil into waterways. Environmentally-friendly products readily degrade and/or bind to soil particles.
- Read labels carefully for restrictions about the rate, timing, and placement. Calibrate equipment to apply at the proper rate. Carefully calculate how much concentrate is needed to treat the specific site with the equipment being used to eliminate disposal of excess spray mix.

## Spill Prevention & Response

- Check storage and buildings routinely for leaks and spills.
- Store supply materials (paint, chemicals) and waste containers in original containers where possible or clearly mark/label to identify contents and quantity.
- Supply materials and waste containers are stored under cover to prevent contact with rain and product deterioration; or when uncovered, containers are clean and sealed. Ideally this is in a cool, ventilated building with a concrete floor. Where infeasible, secondary containment is recommended.
- Flammable liquids requiring ventilation are stored outdoors under roof or have secondary containment where appropriate. (i.e. pool chemicals, fuel, drums, herbicide, etc. near storm drains or waterways)
- Spill control plans should be in place with procedures for proper spill response to minimize environmental impacts. SPCC plans must meet regulatory criteria in 40 CFR 112 for sites with a storage capacity over 660 gallons of oil in one container or 1,320 gallons on site.
- Outdoor spills or leaks of paint, cleaners or chemicals are cleaned or repaired promptly.
- Maintain spill recovery materials for immediate response to an outdoor spill.
- Paints, cleaners, or chemicals are not handled, transferred or disposed of in or near storm drains.
- Use a ground cloth or oversized buckets for paint mixing and tool cleaning.
- Use tarps or other means for painting to minimize wind drift and contain spills and overspray.
- Emergency phone numbers are clearly posted in the maintenance shop or near material storage areas.

### *Stormwater Protection and Spill Response Materials*

- *Spill kit and equipment for a dry clean up (socks, absorbent pads, oil sorb or kitty litter, broom, and dustpan)*
- *Spill supplies for cleanup in a waterway available at Public Works*
- *Inlet protection devices (wattles, drain covers, berms, and/or filter fabric)*
- *Drip pans or buckets*
- *Tarps or ground cloths*
- *Containers for collecting cleanup waste*

## Inspection procedures

The inspection checklist in Appendix A should be completed and return to the Stormwater Coordinator by December 31<sup>st</sup> each year.

## Standard Operating Procedures for: Stormwater and Engineering



Locations:	<b>City Hall &amp; Law Enforcement Center Campus</b> (new location) 1001 Schroeder Creek Blvd. – 5.3 acres – 1 stormwater outfall
Responsible Parties:	Stormwater Management Coordinator (Jamie Paige)

### Training procedures

Applicable employees should be trained in general stormwater pollution prevention and Best Management Practices (BMPs) annually. This includes how to recognize, respond to and report improper discharges or connections to the storm system.

### Record Keeping and Documentation

- A list of all employees trained is maintained by the Responsible Party.
- Copies of current contracts for building services or other maintenance should be kept on file.

Waste	Max Amount/ Capacity	Storage Location	Method of disposal	Contractor	Disposal Frequency
Dead Limbs, Grass	4 cu. Yds.	Not stored	Contractor Hauls Offsite	Landesign	Varies per site in contract
Trash	4 cu. Yds.	Public Works Dumpster	Waste Hauler	Wilson Waste	Weekly as needed
Spill Cleanup Waste	Varies	Public Works Warehouse	Hazardous Waste Hauler	Safety Kleen	As needed

### Best Management Practices

- Municipal projects are reviewed and designed in accordance with city codes and the City of Wentzville Engineering Design Criteria.
- Procedures are established for city-performed construction to follow City of Wentzville policies and Standard Specifications and Construction Details.
- Inspections and maintenance of stormwater systems at municipal facilities occurs on a routine basis as part of departmental inspections and complaints are also investigated.
- Periodic outfall and system inspections occur to identify illicit discharges.
- Maintain spill recovery materials for immediate response to an illicit discharge that gets to the storm system, whether from staff or public notification.

#### Stormwater Protection and Spill Response Materials

- Spill kit and equipment for a dry clean up (socks, absorbent pads, oil sorb or kitty litter, broom, and dustpan)
- Spill supplies for cleanup in a waterway available at Public Works
- Inlet protection devices (wattles, drain covers, berms, and/or filter fabric)
- Drip pans or buckets
- Tarps or ground cloths
- Containers for collecting cleanup waste

## Standard Operating Procedures for: **Streets**



Locations:	<b>Public Works</b> (outdoors) 200 E. 4 <sup>th</sup> St. - 2.38 acres - 1 storm outfall & 2 treatment structures
Responsible Parties:	Street Superintendent (Dave Kraleman)

### Training procedures

Applicable employees should be trained in general stormwater pollution prevention and facility Best Management Practices (BMPs) annually at a minimum. This includes how to recognize, respond to and report improper discharges or connections to the storm system.

### Record Keeping and Documentation

- A list of all employees trained is maintained by the Responsible Party.
- Copies of current contracts for building services or other maintenance should be kept on file.

### Potential Materials That Impact Stormwater Runoff or Surface Waters

Material	Maximum quantity kept on hand	For use within (time)	Storage location
Sodium Chloride	1100 tons	6 months	Under roof at PW
Brine (37% Sodium Chloride, water mix)	6000 gallons	6 months	In tanks under roof
Aggregate	50 tons	6 months	On concrete pad outside PW
Cold Patching Material	4 tons	6 months	On concrete pad outside PW
Concrete Bag Mix	60 bags	6 months	Under roof
Paint, Spray	60 cans	6 months	Under roof
Paint, Traffic	440 gallons	6 months	Under roof
Crack-seal Material	220 gallons	6 months	Under roof

Waste	Max Storage Capacity	Storage Location	Method of Disposal	Contractor	Disposal Frequency
Sweeper Debris		Outside of PW	Construction Landfill	ISEI	Weekly/ Biweekly
Paint (Punctured Spray Cans)	55 gallons	Water Shop	Hazardous Waste Recycling	Public Works	When Needed
Metal Cans (Spray Paint)	4 cu. yds.	Public Works Recycling Dumpster	Can Puncturing & Recycling	Wilson Waste	Weekly
Oil (Filter Crushing)	110 gallons	Vehicle maintenance	Metal & hazardous waste recycling	Safety Kleen	Twice/ year

## Best Management Practices

### Operations

- Inspect facilities annually at a minimum.
- Keep SDS sheets for chemicals in Streets Maintenance Building for information on reportable spill quantities, proper handling and health safety and post Spill Response Protocol flyer in break room or other visible area.
- Perform clean/paving activities during dry weather.
- Cover or seal nearby storm drains before maintenance repairs are made.
- Storm drains/inlets can be marked to help protect from improper usage.
- Sweep parking lots or use other dry cleaning methods rather than hosing down.
- Land disturbances are restored with seed and straw or sod for erosion control.
- Institute a preventive maintenance program to minimize fluid leaks and equipment failures. Inspect vehicles and equipment frequently, collecting leaks with pans or absorbents and repairing leaks.
- Design parking lots to include semi-permeable areas or vegetative buffers where possible.
- Construction or maintenance activities that excavate in or discharge dredge or fill material into "Waters of the United States," (i.e. ditches, creeks, rivers, lakes, ponds and wetlands) may require a Corps of Engineers 404 permit and a MDNR 401 water quality certification. Examples include placing culverts in creeks, constructing outfalls, and stream restoration.
- Evaluate road salt application rates and alternatives (i.e. brine) to reduce salt runoff in storm drains and waterways.
- Implement the use of salt brine in parking lots for deicing pre-treatment to reduce salt use.
- Annually track application rates, reductions and/or methods used to reduce salt applications.

### Waste Management

- Keep the facility and surrounding area clear of litter.
- Maintain adequate waste receptacles with covers or lids to prevent blowing.
- Compost or properly dispose street sweeping and yard waste. Do not dump in or near creeks.



- For outdoor painting or sanding activities, use a tarp to contain and capture material. Collect and dispose of paint chips and sandblast waste in the trash for non-lead based paint, or evaluate lead based paint for hazardous waste disposal.
- Spray paint cans used to mark utility locations should be recycled using the pressurized can puncturing system located in at Public Works in the Water bay.

### Vehicle/Equipment Maintenance

- Preventive maintenance program minimizes fluid leaks and equipment failures. Vehicles and equipment are inspected routinely and repaired as needed.
- All equipment maintenance and repairs are performed at a designated area under cover to limit exposure to rain when possible.
- On occasion and when necessary, outside maintenance work is performed on a paved surface with provisions made to contain and cleanup all drips and spills.
- Vehicle operators use commercial fueling stations whenever possible.
- When fueling equipment, staff should be instructed to remain with the equipment during fueling and to not top-off the fuel tank to avoid overflows and spills.
- A vehicle/equipment wash bay is located under cover and drains to the sanitary system.

### Spill Prevention & Response

- Routinely check storage/building areas for leaks or spills.
- Supply materials (paint, chemicals) and waste containers are in original containers where possible or clearly marked to identify contents.
- Supply materials and waste containers are stored under cover to prevent contact with rain and product deterioration; or when uncovered, containers are clean and sealed. Ideally this is in a cool, ventilated building with a concrete floor.
- Maintain spill recovery materials for immediate response to an outdoor spill.
- Outdoor spills and leaks are cleaned or repaired promptly.
- Paints, cleaners, or chemicals are not handled, transferred or disposed of in or near storm drains and procedures prevent overfilling and spills.
- Use a ground cloth or oversized buckets for paint mixing and tool cleaning.
- Use tarps or other means for painting to contain spills.
- Secondary containment systems are used where appropriate (i.e. fueling stations, oil drums, etc.)
- Spill control plans should be in place with procedures for proper spill response to minimize environmental impacts. SPCC plans must meet regulatory criteria in 40 CFR 112 for sites with a storage capacity over 660 gallons of oil in one container or 1,320 gallons on site.
- Emergency phone numbers are clearly posted in the shop or near material storage areas.

#### *Stormwater Protection and Spill Response Materials*

- *Spill kit and equipment for a dry clean up (socks, absorbent pads, oil sorb or kitty litter, broom, and dustpan)*
- *Supplies for cleanup in a waterway available under Public Works Bldg. stairs*
- *Inlet protection devices (wattles, drain covers, berms, and/or filter fabric)*
- *Drip pans or buckets*
- *Tarps or ground cloths*
- *Containers for collecting cleanup waste*

## Facility

- Floors in work areas are sloped to drains connected to a sediment /oil trap prior to discharge into the sanitary sewer system. Trap is pumped out quarterly, or as needed.
- A site-plumbing schematic showing all drains, traps, and shut-offs for utilities should be posted in shop. Employees should be made aware of sanitary sewers and storm drains to ensure all wastewater is discharged to the sanitary sewer.
- All above ground storage tanks have secondary containment in accordance with SPCC requirements and are covered with a roof. If containment is not roofed, inspect accumulated rain water for contamination prior to discharge.

## Inspection procedures

The inspection checklist in Appendix A should be completed and return to the Stormwater Coordinator by December 31<sup>st</sup> each year.

## Standard Operating Procedures for:

# Vehicle Maintenance



Locations:

### Vehicle Maintenance

200 E. 4<sup>th</sup> St. - 2.38 acres

Responsible Parties:

Lead Mechanic (Roy McGuire)

## Training procedures

Applicable employees should be trained in general stormwater pollution prevention and facility Best Management Practices (BMPs) annually. This includes how to recognize, respond to and report improper discharges to the storm system.

## Record Keeping and Documentation

- A list of all employees trained is maintained by the Responsible Party.
- Copies of current contracts for building services or other maintenance should be kept on file.

## Potential Materials That Impact Stormwater Runoff or Surface Waters

Material	Maximum quantity kept on hand	For use within (time)	Storage location
Oil (55-gallon drums)	1100 gallons	6 months	VM Building (under roof)
Oil	12 quarts	6 months	VM Building (under roof)
Transmission Fluid	55 gallons (1 drum)	6 months	VM Building (under roof)
Hydraulic Fluid	2 drums	6 months	VM Building (under roof)
Antifreeze	1 drum	6 months	VM Building (under roof)
Gasoline	1 gallon	6 months	VM Building (under roof)
Diesel Fuel	1 gallon	6 months	VM Building (under roof)
Kerosene	5 gallon	6 months	VM Building (under roof)
Coolant	1 drum	6 months	VM Building (under roof)
Washer	1 drum	6 months	VM Building (under roof)
Brake Cleaner	1 drum	6 months	VM Building (under roof)
Brake Solvent	1 drum	6 months	VM Building (under roof)
Carb Cleaner	5 cans	6 months	VM Building (under roof)
Paint	275 cans	6 months	VM Building (under roof)

Oil Dry	2 drums	6 months	VM Building (under roof)
Other Grease and Lubricants	100 cans	6 months	VM Building (under roof)

Waste	Max Storage Capacity	Storage Location	Method of disposal	Contractor	Disposal Frequency
Used Tires	125 tires	VM Storage Shed	Certified Contractor	Tire Shredders	3 times/year
Used Oil Dry	2 drums	VM Building	Certified Contractor	Safety Kleen	3 times/year
Paint (Punctured Spray Cans)	55 gallons	Water Shop	Hazardous Waste Recycling	Public Works	When Needed
Metal Cans (Spray Paint)	4 cu. yds.	Public Works Recycling Dumpster	Can Puncturing & Recycling	Wilson Waste	Weekly

## Best Management Practices

### Operations

- Inspect facilities annually at a minimum.
- Maintain SDS sheets for cleaning supplies in Public Works Building and post Spill Response Protocol flyer in break room or other visible area.
- All routine vehicle maintenance and repairs at municipal facilities are performed at designated area under cover to limit exposure to rain. On occasion and when necessary, outside maintenance work is performed on a paved surface with provisions made to contain and cleanup all drips and spills.
- Responsible party keeps SDS sheets for onsite chemicals for reportable spill quantities, proper handling and health safety.

### Waste Management

- Keep the facility and surrounding area clear of litter.
- Dispose of waste materials according to applicable laws and regulations.
- Waste oils, filters, antifreeze, cleaners etc. are collected in designated, labeled containers and recycled to the maximum extent practicable.
- Used oil filters should be gravity drained for 24 hrs. with the anti-drain back valve or filter dome punctured to facilitate the draining process. Crushing the oil filter and recycling is preferred.
- Records of waste pickups are logged and maintained in file.

## Vehicle/Equipment Maintenance

- Preventive maintenance program minimizes fluid leaks and equipment failures. Vehicles and equipment are inspected routinely and repaired as needed.
- Maintain equipment to ensure the proper operation of automatic shutoff devices on pumps and, overfill protection and spill buckets on tanks.
- Vehicle operators use commercial fueling stations whenever possible.
- When fueling equipment, staff should be instructed to remain with the equipment during fueling and to not top-off the fuel tank to avoid overflows and spills.

## Spill Prevention & Response

- Supply materials (paint, chemicals) and waste containers are in original containers where possible or clearly marked to identify contents and quantity.
- Supply materials and waste containers are stored under cover to prevent contact with rain and product deterioration; or when uncovered, containers are clean and sealed. Ideally this is in a cool, ventilated building with a concrete floor.
- Stored drums/containers remain closed. Tops of oil drums have absorbent mats and are free of standing liquid.
- In areas where spills could occur, keep spill kits and absorbents nearby and display signage indicating the location of those spill kits. Storm drain plugs or covers are recommended to prevent the flow of spilled material from entering the storm drain when work has to be performed outdoors.
- Leaks and dripping fluids are collected with pans or absorbents.
- Label drip pans and use when making and breaking connections.
- Immediately clean up all spills of chemicals or vehicle fluids using dry methods (absorbents), minimizing the use of water whenever possible.
- Auto fluids or other chemicals are not handled or disposed of in or near storm drains. Unloading and transfer procedures should be developed to prevent overfilling and spills.
- Batteries, oil drums etc. that have spill/leak potential are stored indoors and have secondary containment, when possible.
- Neutralizer and absorbent are kept by both new and used batteries.
- Spill control plans should be in place with procedures for proper spill response to minimize environmental impacts. SPCC plans must meet regulatory criteria in 40 CFR 112 for sites with a storage capacity over 660 gallons of oil in one container or 1,320 gallons on site.
- Emergency phone numbers are clearly posted in the shop or near material storage areas.

### *Stormwater Protection Equipment and Materials*

- *Spill kit and equipment for a dry clean up (socks, absorbent pads, kitty litter, broom, and dustpan)*
- *Drip pans or buckets*
- *Tarps or ground cloths*
- *Containers for collecting cleanup wastes*

## Facility

- Employees should be made aware of sanitary and storm sewers to ensure all wastewater is discharged to the sanitary sewer.
- Check storm drain outside vehicle maintenance, north of the building, at least twice a year.
- Storm drains/inlets can be labeled to help protect from improper usage.
- Stormwater treatment devices can be used in equipment fueling areas to prevent runoff.

- All above ground storage tanks shall have secondary containment in accordance with SPCC requirements and should be covered. When cover cannot be provided, inspect accumulated rainwater for contamination prior to discharge from the site.

### **Inspection procedures**

- Regularly check storage areas and monitor parked vehicles or equipment for leaks or spills.
- Regularly inspect all tanks and containers to ensure physical integrity.
- The inspection checklist in Appendix A should be completed and return to the Stormwater Coordinator by December 31<sup>st</sup> each year.

## Standard Operating Procedures for:

# Water



Locations:

**Water Department**  
200 E. 4<sup>th</sup> St.

Responsible Parties:

Superintendent Water Supply & Distribution (Gary Spence)

The City of Wentzville purchases its water from PWSD #2 of St. Charles County and provides distribution of public drinking water. The City maintains water distribution infrastructure including four water storage tanks and 229.2 miles of public water mains.

## Training procedures

All applicable employees should be trained in general stormwater pollution prevention and Best Management Practices (BMPs) annually. This includes how to recognize, respond to and report improper discharges to the storm system or waterways.

## Record Keeping and Documentation

- A list of all employees trained is maintained by the Responsible Party.
- Copies of all contracts for building services or other maintenance should be kept.

## Potential Materials That Impact Stormwater Runoff or Surface Waters

Material	Maximum quantity kept on hand	For use within (time)	Storage location
Paint	15 gallons	1 year	Cabinet under roof
Oil	25 gallons	1 year	Cabinet under roof
Lubricants	20 gallons	1 year	Cabinet under roof
Chlorine	10 gallons	1 year	Cabinet under roof
Various Cleaning Supplies	10 gallons	1 year	Cabinet under roof

Waste	Max Storage Capacity	Storage Location	Method of disposal	Contractor	Disposal Frequency
Water from hydrant flushing	N/A	N/A	Land Application	No	Every day
Paint (Punctured Spray Cans)	55 gallons	Water Shop	Hazardous Waste Recycling	Public Works	When Needed
Metal Cans (Spray Paint)	4 cu. yds.	Public Works Recycling Dumpster	Can Puncturing & Recycling	Wilson Waste	Weekly

## Best Management Practices



## Operations

- Inspect facilities annually at a minimum.
- Maintain SDS sheets for cleaning supplies in Public Works Building and post Spill Response Protocol flyer in break room or other visible area.
- Chlorine use for disinfection is kept at a minimum.
- One-third of the city's hydrants are flushed every year. Water is discharged into vegetated areas where possible with dispersers or into streets. Hydrant flushing and discharges from potable water sources are authorized discharges unless this is determined to be a substantial contributor of pollutants to the storm system.
- Responsible party keeps SDS sheets in the Control Building behind the door by the office for onsite chemicals for reportable spill quantities, proper handling and health safety.

## Vehicle/Equipment Maintenance

- All equipment maintenance and repairs are performed at a designated area under cover to limit exposure to rain when possible.
- On occasion and when necessary, outside maintenance work is performed on a paved surface with provisions made to contain and cleanup all drips and spills.
- Preventive maintenance program minimizes fluid leaks and equipment failures. Vehicles and equipment are inspected routinely and repaired as needed.
- Preventive maintenance on smaller equipment is done in bays under roof at Public Works. Maintenance on larger equipment is taken to vehicle maintenance.
- Vehicle operators use commercial fueling stations when possible.
- When fueling equipment, staff should be instructed to remain with the equipment during fueling and to not top-off the fuel tank to avoid overflows and spills.

## Spill Prevention & Response

- Routinely check storage/building areas for leaks or spills.
- Water quality tests are stored and performed routinely inside the Control Building.
- Supply materials (paint, chemicals) and waste containers are in original containers where possible or clearly marked to identify contents and quantity.
- Supply materials and waste containers are stored under cover to prevent contact with rain and product deterioration; or when uncovered, containers are clean and sealed. Ideally this is in a cool, ventilated building with a concrete floor.
- Maintain spill recovery materials for immediate response to an outdoor spill.
- Outdoor spills and leaks are cleaned or repaired promptly.
- Paints, cleaners, or chemicals are not handled, transferred or disposed of in or near storm drains and procedures prevent overfilling and spills.

### *Stormwater Protection and Spill Response Materials*

- *Spill kit and equipment for a dry clean up (socks, absorbent pads, oil sorb or kitty litter, broom, and dustpan)*
- *Supplies for cleanup in a waterway available under Public Works Bldg. stairs*
- *Inlet protection devices (wattles, drain covers, berms, and/or filter fabric)*
- *Drip pans or buckets*
- *Tarps or ground cloths*
- *Containers for collecting cleanup waste*

- Use a ground cloth or oversized buckets for mixing chemicals or tool cleaning.
- Use tarps or other means for painting to minimize wind drift and contain spills and overspray.
- Secondary containment systems are used where appropriate (i.e. fueling stations, oil drums, etc.)
- Spill control plans should be in place with procedures for proper spill response to minimize environmental impacts. SPCC plans must meet regulatory criteria in 40 CFR 112 for sites with a storage capacity over 660 gallons of oil in one container or 1,320 gallons on site.
- Emergency phone numbers are clearly posted in the Water shop or near material storage areas.

## Waste Management

- Keep facility grounds clear of litter.
- Maintain adequate waste receptacles with covers or lids to prevent blowing.
- For hydrant painting or sandblasting, use a tarp to contain and capture material. Collect and dispose of paint chips and sandblast waste in the trash for non-lead based paint, or evaluate lead based paint for hazardous waste disposal.
- Cease sand blasting operations on windy days.
- Spray paint cans used to mark utility locations should be recycled using the pressurized can puncturing system located on the north side of the water shop building outside.

## Inspection procedures

The inspection checklist in Appendix A should be completed and return to the Stormwater Coordinator by December 31<sup>st</sup> each year.

## Standard Operating Procedures for: Wastewater Treatment Plant



Locations:	<b>Wastewater Collections Control Building</b> 802 E. Pearce Blvd. <b>Water Reclamation Center</b> 2455 Mette Rd. – 56.78 acres – 0 stormwater structures
Responsible Parties:	Wastewater Services Superintendent (Ryan Peasel) Wastewater Plant Supervisor (Dan Todd) Wastewater Collections Supervisor (John Gripentrog)

The Wentzville Water Reclamation Center is permitted to process 4.3 millions of gallons of wastewater per day. The City maintains wastewater collection infrastructure including 39 lift stations and 204 miles of public gravity sewer.

### Training procedures

All applicable employees should be trained in general stormwater pollution prevention and Best Management Practices (BMPs) annually at a minimum. This includes how to recognize, respond to and report improper discharges to the storm system or waterways.

### Record Keeping and Documentation

- A list of all employees trained is maintained by the Responsible Party.
- Copies of all contracts for building services or other maintenance should be kept.

### Potential Materials That Impact Stormwater Runoff or Surface Waters

Material	Maximum quantity kept on hand	For use within (time)	Storage location
Ferric Chloride	3000 gallons	1 to 2 years	4200 gal Fiber glass tank in Containment Bldg.*
Hydrochloric Acid	220 gallons	2 year	55 gal drums in Fiber glass tank in Containment Bldg.*
Lime, Dry	20 Tons	6 months to a year	Lime tower/Dry*
Lime, Wet	20 Tons	6 months to a year	Fiber glass tank in Lime tower*
Various Cleaning Supplies	10 gallons	6 months	Cabinet under roof*
Dewatered bio-solid cakes	40 tons	18 months	Storage area with a roof

\*Drains to sanitary system.

Waste	Max Storage Capacity	Storage Location	Method of disposal	Contractor	Disposal Frequency
Bio-solids	3 million gallons	Concrete tanks	Liquid Land Application Dry Cake	No	Within 170 days
Lab Testing Waste	5 gallons	Lab	Hauled off	Heritage Environmental	3 years

## Best Management Practices

### Operations

- The facility is authorized to discharge in accordance with the effluent limitations and monitoring requirements provided by DNR Operating Permit MO-0093599.
- All wastewater pump stations are inspected monthly and maintained annually.
- Inspect facilities annually at a minimum.
- Maintain SDS sheets for cleaning supplies in Wastewater Lab Control Building and post Spill Response Protocol flyer in break room or other visible area.
- Containment walls meet requirements with one foot thick concrete. If there is a leak, a contractor pumps out the waste and disposes in accordance with state and federal law.
- Tanks are scrubbed with a brush and fire hose with no additional cleaners.
- Chlorine use for cleaning or disinfection is kept at a minimum. Where used, this is contained within the wastewater system or discharges to vegetated buffers.
- A 50-yard no-mow buffer strip is maintained between plant operations and McCoy Creek.
- Liquid bio-solids are dewatered with a plate and frame press and stored onsite under roof in winter.
- Liquid bio-solids are land-applied to fields in summer months per state and federal law. Buffer strips are maintained around the 78-acre fields.
- Voluntary stream water quality monitoring occurs on effluent and downstream from the WRC.
- Responsible party keeps SDS sheets in the main Control Building for onsite chemicals for reportable spill quantities, proper handling and health safety.

### Vehicle/Equipment Maintenance

- All equipment maintenance and repairs are performed at a designated area under cover to limit exposure to rain when possible.
- On occasion and when necessary, outside maintenance work is performed on a paved surface with provisions made to contain and cleanup all drips and spills.
- Preventive maintenance program minimizes fluid leaks and equipment failures. Vehicles and equipment are inspected routinely and repaired as needed.
- Vehicle operators use commercial fueling stations when possible.
- When fueling equipment, staff should be instructed to remain with the equipment during fueling and to not top-off the fuel tank to avoid overflows and spills.

## Spill Prevention & Response

- Check storage and building areas each work day for leaks or spills.
- Water quality tests are stored and performed routinely inside the WRC Laboratory or by contracted lab services.
- Supply materials (chemicals) and waste containers are in original containers where possible or clearly marked to identify contents.
- Supply materials and waste containers are stored under roof to prevent contact with rain and product deterioration; or when uncovered, containers are clean and sealed. Ideally this is in a cool, ventilated building with a concrete floor.
- Maintain spill recovery materials for immediate response to an outdoor spill.
- Outdoor spills and leaks are cleaned or repaired promptly using absorbents.
- Major spills are contained by constructing a berm and using trash pump or vacuum truck to remove the waste.
- Paints, cleaners, or chemicals are not handled, transferred or disposed of in waterways and procedures prevent overfilling and spills.
- Use tarps or other means for painting to minimize wind drift and contain spills.
- Secondary containment systems are used where appropriate (i.e. fueling stations, oil drums, etc.)
- Spill control plans should be in place with procedures for proper spill response to minimize environmental impacts. SPCC plans must meet regulatory criteria in 40 CFR 112 for sites with a storage capacity over 660 gallons of oil in one container or 1,320 gallons on site.
- Emergency phone numbers are clearly posted in the break room or maintenance shop.

### *Stormwater Protection and Spill Response Materials*

- *Spill kit and equipment for a dry clean up (socks, absorbent pads, oil sorb or kitty litter, broom, and dustpan)*
- *Supplies for cleanup in a waterway available under Public Works Bldg. stairs*
- *Inlet protection devices (wattles, drain covers, berms, and/or filter fabric)*
- *Drip pans or buckets*
- *Tarps or ground cloths*
- *Containers for collecting cleanup waste*

## Waste Management

- Keep facility grounds clear of litter.
- Dumpsters are kept inside at the Grit Building or outside with lids closed to prevent blowing.
- Lab test wastes are collected in sealed buckets and stored in the lab until shipment for disposal.
- For painting or sandblasting, use a tarp to contain and capture material. Collect and dispose of paint chips and sandblast waste in the trash for non-lead based paint, or evaluate lead based paint for hazardous waste disposal.
- Cease sand blasting operations on windy days.
- Spray paint cans used to mark utility locations should be recycled using the pressurized can puncturing system located in at Public Works in the Water bay.

## Inspection procedures

The inspection checklist in Appendix A should be completed and return to the Stormwater Coordinator by December 31<sup>st</sup> each year.

## Appendix A



### **Municipal Facility Inspection Checklist**

Facility Name/Location: \_\_\_\_\_

Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Good Housekeeping		YES (Acceptable)	NO (Action Required)	N/A
O&M Program identifies potential pollution sources and best practices?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintenance schedules have been followed?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Prevention and Response Plan created and implemented?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety Data Sheets (SDS) updated and accurate?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storm Drain Systems				
Storm drains (only rain is entering drain)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Basins (detention, ponds, water quality facilities functioning well)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outfalls (no signs of staining or discharges)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Response and Prevention				
Storage areas (chemicals, equipment, soil, waste, recycling)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Containers (labeled with contents and expiration dates, sealed)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floor drains, oil/water separators		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vehicles (leaks /spills contained)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill kits/supplies available		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storage Tanks Secondary containment systems are adequate	List substance & amount:  Containment method:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there any additional sources of pollutants stored in locations exposed to stormwater? If so, what are they?	List:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Waste Material Management				
Receptacles appropriate for hazardous and non-hazardous waste		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Waste (properly managed and disposed)	List Type:  Disposal Method:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storage areas (aboveground, underground, drums, containers)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landscaping and Lawn Care				
Debris (trash, grass clippings, mulch, leaves kept out of storm system)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient ground cover (i.e. grass, plants, mulch prevents erosion)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Continued on the next page.



Inspector Name (Print): \_\_\_\_\_ Signature: \_\_\_\_\_

Responsible Party Name: \_\_\_\_\_ Signature: \_\_\_\_\_

## Appendix B



### **Operations and Maintenance Training Report Form**

**TRAINING REPORT**  
**POLLUTION PREVENTION FOR MUNICIPAL OPERATIONS**

**Department:** \_\_\_\_\_ **Date:** \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

**Instructor:** \_\_\_\_\_ **Course Length (hours):** \_\_\_\_\_

**Facility Location(s) Covered:** \_\_\_\_\_

**Training Topic:** *(Check all that apply)*

- |  |  |
|--|--|
| <input type="checkbox"/> Good Housekeeping at Municipal Facilities | <input type="checkbox"/> Wentzville's Stormwater Management Plan     |
| <input type="checkbox"/> Pollution Prevention & Illicit Discharges | <input type="checkbox"/> Post-Construction Stormwater Runoff Control |
| <input type="checkbox"/> Waste and Materials Management            | <input type="checkbox"/> Tracking Control/Oversight                  |
| <input type="checkbox"/> Sediment and Erosion Control              | <input type="checkbox"/> Other _____                                 |

**Specific Training Objective:** \_\_\_\_\_

**Attendee Roster (attach additional forms as necessary)**

Print Name	Signature
1.	
2.	
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**COMMENTS:**

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